1845

A DESCRIPTION OF

AND

SAILING DIRECTIONS

FOR, THE

River of St. Lawrence,

BETWEEN

CAPE GASPÉ AND THE RIVER ST. JOHN,

TO

QUEBEC AND MONTREAL;

ADAPTED TO ACCOMPANY THE CHART PUBLISHED BY R. H. LAURIE,

WHICH HAS BEEN COMPOSED FROM THE LATE SURVEYS.

INCLUDING THE MOST RECENT INFORMATION.

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THE PHARONOLOGY,

OR

DESCRIPTION OF THE LIGHTHOUSES.

ANTICOSTI.—On the S.W. point of Anticosti, a circular stone tower, 75 feet high. The light, which is brilliant, revolves once in a minute, and can be seen from N.N.W. round by the west and south, to S.E. by E. The lantern is elevated 100 feet above high water, and the light may be seen at five leagues off. Lighted from the 25th of March to the last day of the year. Page 4.

On HEATH POINT, *near the S.E. extremity of this island*, is another lighthouse of the same form, dimensions, and colour, as the above, and also built of the island limestone. The light has not yet been shown. Heath Point being low, it disappears below the horizon at the distance of a few miles, and the lighthouse then appears like a sail off the island. Page 3.

POINT DE MONTS, on the north side of the River of St. Lawrence, nearly opposite to Cape Chatte, a tower with a fixed light at about 100 feet above the level of the sea; lying S. 58° W. from the outer part of Caribou Point, over which, and to the eastward of it, the land may be seen. From the lighthouse, the western extremity of Point de Monts bears S. 64° W. about one mile; and when a ship is to the westward of the Point, the lighthouse will appear in one with the outermost rocks of the same. In the day-time it forms a bold, distinct landmark; and from this line of bearing, ships are in the best fair-way for sailing up or down the river. Page 7.

BICQUETTE ISLAND.—A lighthouse having been erected on the west end of the island of Bicquette, in the River St. Lawrence, a *revolving light* of the first class was shown thereon for the first time, on the 9th August, 1844; and the light will continue to be shown every night from sunset to sunrise, from the 15th April to the 15th December, in each year. The tower is 70 feet high, and the light stands 130 feet above the level of the sea, the north-west reef bearing from it due west, 1¼ mile. This light will revolve at regulated intervals of two minutes.

A nine-pounder gun is placed near the lighthouse, and will be fired every hour during foggy weather and snow storms. Pages 13 and 28.

GREEN ISLAND in the River.—On the north point of this island is a light-tower, with a fixed light, at about 60 feet; shown from the 15th of April to the 10th of December. Note (*) page 14 and page 29.

TRAVERSE, near CAPE ST. ROQUE.—A floating light in the South Traverse, on the edge of the Bank of St. Roque; five miles above, a chequered buoy, and three-quarters of a mile below, a black buoy on the same. Page 18 and page 31.

SOUTH PILLAR.—A *revolving light* will be shown from the tower lately erected on South or Stone Pillar, on and after the night of the 28th September, 1843, during the season of the navigation. This light will revolve at regulated intervals of 1½ minute. Pages 18 and 31.

LAKE ST. PETER, above Quebec. At about 47 miles below Montreal, is a light-vessel and a buoy indicating the entrance to the south channel at the western end of Lake St. Pierre or St. Peter. Page 34.

THE

RIVER OF ST. LAWRENCE, &c.

*** Throughout this Work, the given Longitude is the Longitude West from Greenwich. The Bearings and Courses are those by Compass, unless where otherwise expressed: But those given thus [*E.N.E.*] signify the true; and the given direction of Wind, Tide, and Current, is to be considered as the true. The given depths are those at low water, spring-tide.

Variations of the Compass.—At the Seven Islands, 24°: Cape de Monts, 22°: Father Point, 19° 15′: Port Neuf, 18° 20′: off the Isle Bic, 18° 40′: at Tadousac, on the mouth of the Saguenay, 17°: Isle aux Coudres, 16°: Quebec and the Isle of Orleans, 15°: Trois Rivières, 11°: Lake St. Peter, 10°: Contrecour, 8° 45′: Montreal, 7° 45′.

I.—GENERAL PHENOMENA, WINDS, FOGS, WEATHER, CURRENTS, &c.

WINDS.—The prevalent wind, in the summer, in all parts of the River and Gulf of St. Lawrence, is from the S.W. Westerly winds are almost always accompanied with fine, dry, sunny weather; easterly winds as frequently the contrary. Steady N.W. winds do not blow frequently before September, except for a few hours at a time, when they generally succeed easterly winds that have died away to a calm, and usually veer round to the S.W. In the spring, easterly winds are the prevailing winds, sometimes blowing for several weeks in succession. Strong winds seldom veer quickly round from one point of the compass to another directly contrary; in general they die away to a calm, and are succeeded by a wind in the opposite direction.

The direction of the winds in the river is generally directly up or down its course, following the direction of the high lands on either shore. Thus a S.E. wind in the Gulf becomes E.S.E. between Anticosti and the S. coast; E.N.E. above Point de Monts; and N.E. above Green Island.

FOGS.—The prevalence of fog is one of the greatest sources of danger in the navigation of these parts, and during their prevalence there is no sure guide for the mariner but the constant use of the lead. These fogs prevail when the wind is in the eastern quarter. They sometimes come with westerly winds, but they are rare, and never of long continuance. Winds between south and east bring rain and fog in almost every part; and E.N.E. winds in the River, above Point de Monts, becoming S.E. winds in the Gulf, have the same foggy character.

These fogs are probably occasioned by the unequal temperature of the water brought down by the river and that of the gulf, which is colder, from the influx of the northern stream through the strait of Belle Isle, and between these and the air. The eddy flood mixing with the waters of the River, besides occasioning the dense and low fogs, are also probably the occasion of the phenomenon of Mirage, which sometimes occurs, and which is caused by terrestrial refraction from unequal temperatures in the different strata of the air and water.

Amongst other phenomena met with in the Gulf and River of St. Lawrence, is the *local attraction* or *deviation of the compass*, but this has probably been overrated; this subject is noticed in the directions for sailing up the river, given hereafter. Captain Bayfield says, "The magnetic oxide of iron does exist abundantly, and attracts the needle very powerfully at some points, particularly along the coast from the Bay of Seven Islands eastward. Among the Mingan Islands we found the variation to vary from this cause from 19° to 31°

west. At Port Neuf, and on Manicougan Point, the needle was also disturbed; but these effects were only noticed when the instrument was placed on the shore. In two instances only, when sailing within two miles of the shore, have we observed any effect of the kind upon the compasses on board the *Gulnare*, and then only to the amount of a few degrees."

CURRENTS.—The flood-tide entering the River St. Lawrence, proceeds upwards in the wide and deep channel of the estuary, till it is obstructed by the contracted breadth of the river near Red Island, and the sudden shallowing of it near this part; from this cause it is prevented from continuing in its upward course, and in consequence of the quantity of water here collected not finding a sufficient outlet, it is *reverted*, and forms an *eddy-flood*. The stream of flood, therefore, runs in opposite directions, on either side of the river. This stream coming from the eastward, as it approaches the northern part of Red Island Bank runs very strong, sometimes at a rate of 4 knots, bearing round at this part, and proceeding in a different direction towards the Razade Islands, with a velocity of from 2 to 3 miles per hour, and then proceeds onward with a constant current downwards, thus adding to the current of water from the river itself, and increasing its strength. It is strongest in-shore, and extends about half-way over, diminishing in strength towards the middle; and from this difference in its velocity, and the unequal depth of the river, occasioning those violent whirls and ripples which occur in its strongest parts.

On the south coasts of the part of the River between Cape Gaspé and Green Island, there is no upward current from the tides that is available for navigation: during the floods at spring-tides, there is a westerly current felt close in-shore, the line between the two streams being marked by strong rippling.

Off Point de Monts there is very little or no stream of flood, excepting close in-shore, and the downward current is constant off that point. The point diverts the current to the S.S.E., which runs at a rate of from one to two miles an hour, so that it is difficult for a vessel to beat round it with a westerly wind.

During the ebb tide, the stream runs down on both sides, strongest on the south, and weakest in the middle of the estuary. On the N. shore it is turned to the southward by the projecting points at the Bay de Mille Vaches, Port Bersimis, the Peninsula of Manicougan, and Point de Monts; this fact is important, and ought to be attended to, as this southern tendency is increased at these points by the water brought down by the large rivers between them.

On the south side, the stream of the ebb tide is also increased, by the efflux of water from the Saguenay River, which, setting with great velocity across the tail of the Red Island Bank, adds to the downward course of the stream. The tides in the River above this part are described hereafter.

II.—THE ISLAND OF ANTICOSTI, AND THE NORTH SHORE BETWEEN THE RIVER ST. JOHN AND CAPE DE MONTS.

The ISLAND of ANTICOSTI.—This island is 41 leagues in length, between the meridians of 61° 40′ and 64° 32′; and, with one exception, has no bay nor harbour capable of affording shelter to shipping. It is, generally, very high, and may be seen, in clear weather, at 8 or 9 leagues; but the haze is so great, in the summer season, that it can seldom be distinguished at more than 5 leagues. The island is uncultivated, and covered with immense forests, to which Indians repair, from the neighbouring continent, for the purpose of shooting bears, which are numerous.

The powerful stream setting constantly from the River of St. Lawrence, and the heavy snow-storms in the fall of the year, have unquestionably been the cause of many shipwrecks on Anticosti. But, in order to relieve such as may be cast ashore here, government agents have been appointed to reside at two different stations, all the year, who are furnished with provisions for the use of those who have the misfortune to need them. Boards are placed in different parts, describing the distance and direction to these friendly spots. These establishments were made in the year 1809; the humane intention of which will be honoured wherever it is made known, because the crews of vessels driven on shore here have, sometimes, at the utmost peril of their lives, forsaken them to make their escape to Gaspé.—*Bouchett's Canada*, 1815.

"One of these provision-posts is at two leagues to the S.E. from the west end of the island, in *Ellis Cove*, or *Grand Bay*: the other is in *Shallop Creek*, three leagues to the W.N.W. from the south point of the island, and at the two light-houses."

The government agent lives on shore at the houses, and has, or should have, possession of a sufficient quantity of provisions for the supply of shipwrecked persons, which are to be issued, when required, in regular quantities to each man: the captain, &c. giving receipts for the expenditure.

Early in 1829, a shipwreck was discovered to have taken place on the south shore of the island; and it was then found that the establishment for saving lives, &c. had been abandoned, in consequence of which, it appeared that 16 or 18 persons had perished from hunger on the island, and no one was left to tell the melancholy tale. Circumstances, however, afforded sufficient evidence to prove that the sufferers were the crew and passengers of the ship *Granicus*, which sailed from Quebec on the 29th of October, 1828. The lives of these unfortunate persons would, in all probability, have been preserved, had not the house which they succeeded in reaching been abandoned and destitute of provisions.

Several other vessels, which sailed from Quebec nearly at the same time as the Granicus, have not since been heard of.*

We give these particulars as a caution. The light-house on the S.W. point has since been established, and there can be no doubt that it will be eminently useful. From the light-house, Ellis Cove bears N.W. by N. (*magnetic*) eleven leagues.

On *Heath Point*, the S.E. extremity of Anticosti, is a new light-tower, but which has not yet been illuminated.

East Cape is in lat. 49° 8′ 25″, long. 61° 39′ 59″. It is a perpendicular cliff, 100 feet high, and at the extremity of the low land to the southward is *Heath Point*, on which stands the above mentioned tower; at a little distance it appears like a sail, and is useful in marking the extent of the low land to vessels either to the E. or W. of N.

Between *Fox Bay* to the north and East Cape the coast is bold and clear; there is anchorage in westerly winds between *Cape Sand Top* and East Cape, at the distance of a mile from the shore. *Reef Point* is the south point of Fox Bay, and from it runs a dangerous reef for 1½ mile, with only a few feet water, and 10 fathoms close to the end of it. A house and store are at the N.W. side of the head of the bay, and are the scenes of the sufferings of the crew of the *Granicus*, mentioned above.

Table Head is remarkable by the hill, from which it derives its name; and from hence to *Cape Robert*, 19 miles north-westward, the coast is broken into small bays, which afford no anchorage.

From Cape Robert to *Bear Head* the bearing and distance are N.N.W. ½ W. 6 miles. Between them is *Bear Bay*, which is the best anchorage on the north of Anticosti, and this is in 13 fathoms water; Cape Robert bearing S.E. ¼ S. and Bear Head N. by W. ½ W.

From Bear Head to *Cape Observation*, a bold, high, and remarkable headland, is 12½ miles north-westward; the coast between them is bold, with high, greyish white cliffs, and small bays between.

Eleven miles north-westward from Cape Observation is *Carleton Point*, under which vessels may anchor in fine weather, and can procure wood and water. Farther on is *White North Cliff*, which appears like a white patch on the land, and can be seen at a distance of 6 or 7 leagues. From Carleton Point to within four miles of White North Cliff there are low cliffs. From White North Cliff to *High Cliff* is 26 miles; between them the coast is low in front, with high ridges a short distance in the country. This part of the coast is very dangerous, as the reefs extend for two miles outward, commencing at White North Cliff, where they are half a mile broad, widening to about 12 miles from High Cliff, and terminating about 7 miles E. of it. *High Cliff Cape* is easily recognised, as it is the only cliff on the north coast to which the sea does not come quite up to the base.

From High Cliff to *North Cape* is 13 miles; it is wooded, and of very moderate height. The coast here trends round to West Point, between which are flat reefs, extending a mile off shore. It is in lat. 49° 52′ 20″, and long. 64° 32′ 8″.

* A complete list of the wrecks which have occurred on Anticosti would be a melancholy document: but the instances already given are sufficient to show with how much caution the island should be approached. In thick and foggy weather, the barque *Flora* was stranded here and lost on the 22nd of August, 1832, at about 15 miles from the light-house, when the latter could not be seen.—See *Nautical Magazine*, Feb. 1833, p. 87.

Between West Point and *Cape Henry* the reefs extend a mile and a quarter off shore, and ought to be approached with caution.

ELLIS BAY is the only good anchorage in the island of Anticosti. It runs inland between Cape Henry and Cape Eagle. Off these two capes run flat limestone reefs; that from Cape Henry is nearly a mile out to the south, and the other extends three-quarters of a mile west of Cape Eagle. The entrance between them is 600 fathoms wide, between the depths of three fathoms.

In approaching the bay with westerly winds, run down the reefs off Cape Henry in ten fathoms, until the west side of the *White Cliff*, on the E. side of the bay, is on with the E. side of the westernmost of two hills at a distance, which lie near the north coast between the north and west points; then haul up with these marks on, which will lead into smooth water, close under Cape Henry Reef, in 3½ fathoms, until Gamache House bears N. by E., and then bear up for it, and anchor in 3 fathoms, muddy bottom, about half a mile from the flats at the head of the bay, and 300 fathoms from those on either side.

Becscie River is a very small stream at the head of a small cove, affording shelter for boats, and is 12 miles S.E. from Ellis Cove; and seven miles further, in the same direction, are *St. Mary Cliffs*, which are 21 miles from South-West Point. *Observation River* is 5½ miles northward of this point, and is the largest stream on the island: on the north of this river are some conspicuous sandy cliffs. Between South-West Point and Ellis Cove there is no anchorage, and off the shore there are reefs of flat limestone, extending fully a mile, and often 10 or 12 fathoms water close to them.

South-West Point is a low projecting mound of limestone, having a small cove on its north side, which forms it into a peninsula; on the western extremity of the point stands the light-house, a conical tower, 75 feet high, and the lantern elevated 100 feet above the sea. It shows a brilliant light, which *revolves* once in a minute, and is lighted every year from the 25th of March to the last day in December. To the light-house is attached a provision-post, which forms a very conspicuous land-mark.

Salt Lake Bay has fine sandy beaches, enclosing lagoons, into which the tide flows. It is 11 miles south-eastward of the S.W. point, and off it, in the centre of the bay, with its N.W. point bearing N.E. ½ E. 1¾ mile distant, there is very indifferent anchorage in seven fathoms. Thirty-two miles from South-West Point is *Pavilion River;* in this distance the coast is the boldest on the south of the island, and should be approached with caution.

Shallop Creek lies 13 miles N.W. of the South Point, and the houses of the provision-post are here: between this and the south point the coast is very low, and may be approached safely by using the lead.

South Point is a cliff of sandy clay, about 60 feet high; a reef extends south of it for nearly 1½ mile. The tower on Heath Point and Cormorant Point bearing E. by S. in one clears this. *Cormorant Point* bears E.N.E. 16¼ miles from South Point, and W. by N. 6 miles from Heath Point. Off Heath Point there is one of the best open anchorages on the island. The best berth is in 10 fathoms, sand and mud, with the tower bearing E. by N. and Cormorant Point nothing to the west of W.N.W. The vessel will then be two miles off shore, and sheltered from all winds between W.N.W. to E. by N. round by north.

At Anticosti the tide flows, on the full and change, at 1 h. 43 m.; it runs tide and quarter. Springs rise 10, and neaps 4 feet.

The NORTH SHORE.—The River St. John is frequented occasionally by fishing schooners, early in the season. At the entrance, between the clay cliffs on the west and a sandy point on the east side, the river is 130 fathoms wide; it increases in breadth to nearly half a mile immediately within the entrance, and then gradually contracts. The tide ascends it about six miles, and the river then becomes too rapid to be navigated.

There is good anchorage outside the bar, there being three fathoms at three-quarters of a mile from the mouth.

It divides the governments of Labrador and Canada. The E. point of the entrance is in lat. 50° 17′ 11″, and long. 64° 23′ 13″.*

From the River St. John to *Magpie Point* is W.N.W. 8 miles, and between them is *Magpie Bay*, in which there is good anchorage, in winds off the land. Three quarters of

* The coasts and islands of Labrador, from St. John's River to Hudson's Strait, with the island of Anticosti, were re-annexed to the government of Newfoundland, in 1809, by Act of Parliament, 49 Geo. III. c. 27.

a mile west of the *Magpie River*, which is large and rapid, but of no use to boats, is a rocky shoal, a quarter of a mile off shore.

Ridge Point is 3½ miles W.N.W. ½ W. from Magpie Point, and from it there extends a long narrow ridge of rocky ground, with from 4 to 6 fathoms water, for 4½ miles to the westward, across a bay, and at times there is a very heavy sea upon it.

Sawbill River is 23 miles westward of the River St. John; it may be distinguished by the clay cliffs immediately within the entrance, and by the peculiar hills on either side of it. It will afford shelter to boats and very small craft, but it can only be entered in very fine weather.

Shallop River is 7½ miles N.W. by W. from Sawbill River, and affords shelter only to boats. Off this and Sandy River, 2½ miles to the westward of it, there are some rocks, the outermost of which are half a mile off shore.

The coast of this part is impregnated with iron, the black oxide of which is here found abundantly. It has a strong magnetic action on the compass on shore, causing it to vary from 14 to 29 degrees west; but at the distance of two or three miles, this error does not exceed half a point, and at the distance of five or six miles it is insensible.

MANITOU RIVER is the next to the westward, 4½ miles N.W. by W. from Shallop River. It is the largest on the coast, excepting the rivers St. John and Moisic. It may be readily distinguished from a vessel several leagues off the coast, by two remarkable patches of clay cliff, one of which is close to the eastward, the other about one mile to the north-westward from it. The falls on this river, half a mile from the entrance, are of the most magnificent description. An immense sheet of water rushes over a precipice of porphyry, the height of which is 113 feet.

There is good anchorage off this river, the entrance bearing N.E. ½ E. 1½ mile distant, in 15 fathoms, over mud, and one mile from *Manitou Point*, the nearest point of the shore. Smaller vessels may anchor further in-shore, to the westward of the bar. The only danger is a small rocky shoal, bearing W. by N. 2½ miles from the entrance of the river, about three-quarters of a mile off shore.

Bason River is 10¾ miles W.N.W. ¼ W. from Manitou River, but is only fit for boats or very small craft. *Cape Cormorant* lies 1½ mile west of it, and *Blaskowitz Point* is 5¾ miles W.N.W. ½ W. from the latter, and between them are the *Cormorant Islets*, off which is *Cormorant Reef*, small and dangerous, lying 2½ miles W. ½ N. from the Cormorant Cape. To avoid this, vessels should keep Points Blaskowitz and St. Charles open of each other, as when in one, bearing W.N.W., the mark is on the reef.

POINT ST. CHARLES is in lat. 50° 15′ 25″, and long. 65° 48′ 50″. It is the eastern point of *Moisic Bay*, *Point Moisic* at the entrance of the Moisic River being the western, and 11 miles apart.

Off the point is a dangerous *reef*, being so bold that there is no warning by the lead: some of the rocks always show, but the outermost patches are always covered; these last lie three-quarters of a mile off, to the S.S.W. from the south extreme of the point, and vessels should take care not to be becalmed to the westward of this reef, lest the heavy swell from the S.W., so frequent on this coast, should heave them toward the reef.

Trout River is on the head of the bay, and is the termination of the rocky shores from the E. and the commencement of the bold sandy beach, which extends 6½ miles S.W. by W. to the River Moisic.

The RIVER MOISIC is a larger river than the St. John, but is much obstructed by the sand-bars, which are formed by the great force with which the river descends; there is usually not less than 9 feet least water on the bar. It is very bold-to off its mouth; but from Point Moisic, the south point of the river, there is a shoal extends 2¾ miles W.S.W. ½ W. from the Point, to the *Moisic Rock*, which is exceedingly dangerous. It is as bold as a wall to the S. and S.W., and can generally be seen in fine weather, from the change in the colour of the water, and from heavy breakers, when there is much sea running.

There is no close leading mark for clearing this rock, but a vessel will be 1¾ mile from the edge of the shoal, when the N. side of the Manowin Island is on with the S. point of Great Boule Island.

SEVEN ISLANDS BAY.—The sandy point, which is the eastern point of the entrance of this magnificent bay, is 11 miles westward of Point Moisic. The Bay is completely sheltered by the SEVEN ISLANDS lying off its entrance, which is 2¾ miles wide.

A fine broad, bold, sandy beach extends for three miles northward from the east point of the Bay, to the entrance of the principal river, near which stands the Hudson's Bay Company's trading post. The houses at this post cannot be seen from the outer parts of the Bay, but there is a wooden store on the beach, off which vessels usually anchor. Water can be obtained from this river at high tide.

The SEVEN ISLANDS are high and steep, of primary rocks, very thinly wooded, and can be made out from a distance of 7 or 8 leagues, being unlike any thing else in the Gulf. The easternmost of these islands are the *Great* and *Little Boule*, the former of which is the highest of them all, its summit being 695 feet above the sea at high water; its south point bears west 9¼ miles from Point Moisic. The channel between these two islands is subject to baffling winds, and the flood tide sets strongly to the west, and the ebb to the east, through it; a circumstance that must be attended to in all the channels between the islands.

The *East Rocks*, which are low and bare of trees, lie between Little Boule and the shoal to the N.E.; they are out of the way of vessels, which ought not to go into this embayed place.

The *Little* and *Great Basque Islands* lie next to the Boules; Great Basque, the inner island, is 500 feet high.

MANOWIN and CAROUSEL lie to the S.W. of the Basques: the former is 457 feet high; the latter much lower, and the southernmost of the islands; its south extreme is in lat. 50° 5′ 29″, long. 66° 23′ 35″.

The *West Rocks* lie between Manowin and the *peninsula*, which forms the west point of the Bay of the Seven Islands. They are too small and low to appear as the seventh island, but the peninsula has that appearance when seen at a distance from sea, being higher than any of the islands, and 737 feet above the sea at high water.

There are three obvious channels into the bay, viz. the eastern, middle, and western channels: the eastern, between Great Basque and Sandy Point, is seldom used, having a rock in its centre, which is covered only in high tides. The principal and best is the middle channel, between the Basque Islands on the E. and Carousel, Manowin, and *Point Chassé*, the eastern point of the peninsula, and off which a reef runs out 120 fathoms from the shore. The course through it is due north, its breadth is 1¾ mile, and it is quite free from danger.

The west channel is also quite free from danger, and perhaps, in N. or N.W. winds, is preferable, to save beating; it is between the West Rocks and Point Croix, the south point of the peninsula. This point deflects the ebb tide towards the West Rocks, and this ought to be attended to. The peninsula is quite bold-to, and the mid-channel is nearer to it than the West Rocks: it is quite clear, and there are no leading marks, nor are there any required for any of the channels. The ground is not fit for anchoring until well within the bay. Outside the islands the water is extremely deep, and their shores are quite bold-to.

The stream of tides in the bay and in the principal channels seldom amounts to a knot; but in the narrow channels it may amount to two knots in spring tides, when accelerated by strong winds.

It is high water on the full and change days at 10 minutes past one; spring tides rise 9 feet, neaps 8 feet.

From the S.E. point of Carousel to Cape de Monts the bearing and distance are S.W. by W. ½ W. [*S.W. ¼ S.*] 60 miles. The coast between is less bold in appearance than that to the eastward, and there are no detached rivers off it.

St. Margaret River is 6 miles N.W. by W. from Point Croix, nearly at the head of *St. Margaret Bay*; it affords shelter to boats only.

The *Cawee Islands* lie S.W. by W. ½ W. 16 miles from St. Margaret Point; they are two small hilly islands, nearly bare of trees. Great Cawee Island is the largest and easternmost, and about 250 feet high. Little Cawee Island is a mile to the S.W. of it, and is composed of two islets.

There is a bay on the inner or N.W. side of Great Cawee, in the mouth of which there is anchorage at a cable's length from the island. It is an intricate and dangerous place, but may be of great use as a place of refuge in case of distress. In making for it from the eastward, steer N.W. past the N.E. side of Great Cawee Island, keeping half a mile off, to

avoid the shoal off the mouth of the cove, until the point of the main land to the westward opens clear of the north side of the island. When you arrive between the rocks and the island, which you will come to by steering for the point of the main land, keeping it midway between the north side of the island and these rocks, which lie to the northward of it, haul into the mouth of the small bay, which is on the N.W. side of the latter, and anchor in 7 fathoms at low water. This anchorage may be come at from the westward, by keeping in mid-channel between Little Cawee and the main; but it would be better to pass between Great and Little Cawee Islands, hauling close round the west point of the latter into the anchorage.

The tides run through between the island and the main at a rate seldom exceeding 1½ knot, and generally much less.

Lobster Bay is an excellent open roadstead, between *Point Sproule*, three-quarters of a mile north-westward of Little Cawee Island, and the *Crooked Islands*, three miles to the westward of the point; the head of the bay is occupied by an extensive flat, but there is plenty of room for the largest ships.

Pentecost River is 1½ mile to the westward of Crooked Island; it would afford shelter to small vessels, but is difficult of entrance.

English Point is 7 miles S.W. of Pentecost River, and has a shoal extending off it to the distance of one-third of a mile. It is bold-to on the S.E. and east.

Egg Island is 14 miles S.W. ½ W. from Great Cawee Island. It is low and narrow, without trees, and three-quarters of a mile long in a N.N.E. ½ E. direction; off each end of the island a reef of rocks extends, forming a natural breakwater, 1½ mile long, the northern end of which is three-quarters of a mile off shore, and the southern end nearly a mile. Opposite the N. end of the island, the breadth of the channel is contracted by a shoal extending from the main; on the S.W. part of this narrow part is the best anchorage.

The passage to this from the S. and W. is quite bold, and no directions are necessary; but if it be intended to run through between the island and the main, stand in to the northward, to 8 or 9 fathoms, or until English Point is open half a point to the northward of the North Rocks; then steer for English Point, giving the inner side of the North Rocks a berth of a cable's length, until you have passed them a full quarter of a mile; you may then haul out to sea, going nothing to the southward of S.E. by E. to avoid the N.E. reef.

The tides running between the island and the main are generally from half to one knot, and part of both the stream of ebb and flood passes through the narrow and dangerous three-fathom channel between the island and the North Rocks.

Calumet River is 2½ miles W. by S. from the S.W. end of Egg Island. There are reefs to the S.W. of the entrance for a mile, and extending 600 fathoms from the shore. *Caribou Point* is 8½ miles S.W. by S. from Egg Island, and affords shelter for the pilot-boats, which often look out for vessels here.

TRINITY BAY is five miles further south-westward, and affords excellent anchorage: it is a very valuable stopping-place, in westerly winds, for vessels bound up the St. Lawrence, and at these times pilots are generally found waiting to take vessels upward; but in easterly winds they take shelter in St. Augustin Cove, 1½ mile westward of the Cape.

On the N.E. point of the bay are two large rocks; there is no passage between them, and the northern one dries to the main in spring ebbs. The southern rock lies nearly a quarter of a mile to the southward of the point. The bay is 3½ miles round, from point to point. A river, which falls into it, will supply fresh water; and there is another stream at half a mile to the westward of the western point. Wood is abundant.

To anchor, come-to at half a mile to the eastward of the west point, on which stands a cross, in from 9 to 5 fathoms, and with the point bearing W.S.W. or S.W. by W. Small vessels may anchor in 3 fathoms, at low water, just within the reef, the western point of the bay bearing S.W. At three-quarters of a mile S.W. from the point on which the cross is placed, is a ledge of rocks, dry at low water, and which should not be approached nearer than to the depth of 4 fathoms.

The coast between Cape de Monts and this bay is indented with small sandy coves, and in the interval are three large rocks, always above water, which will be avoided by not approaching nearer than in 8 fathoms.

The light-house on Point de Monts is 5 miles to the south-westward of Trinity Bay. It is a mile and a quarter N.E. by E. ½ E. from the extremity of the cape, and bears

S. 52° W. from the outer part of Caribou Point, over which, and eastward of it, the light may be seen.

The *light tower* is of the usual form, nearly white, and the lantern is elevated at about 100 feet above the level of the sea, and exhibits a bright fixed light.

Ships from the eastward, approaching the light-house, on drawing towards Caribou Point, may bring it to bear W. by S., when they will be in a good fair-way, and may, if requisite, advance toward the land, by the lead. But after passing Caribou Point, on drawing toward the light-house, they should come no nearer than in 12 fathoms; for thus they will avoid two ledges of rocks, one of which lies E.S.E. from the light-house, with only 12 feet over it; the other lies S.W. from the light-house, and E.S.E. from the extremity of Cape de Monts, with 16 feet over it. These rocks are not more than half a mile from shore at low water.

When a ship is to the westward of the Cape de Monts, the light-house will appear in one with the outermost rocks of the same, and the cape will be in one, bearing N.E. by E. ¾ E., and from this line of bearing vessels are in the best fair-way for proceeding up or down the river. You may, if it be required, safely approach the north shore, until the light-house bears E. by N.; but when it bears E. ¼ N. it will be time to tack. When bearing east, it will be shut in with the high land, and cannot be seen to the southward of east, at only a mile from the land.

III.—THE SOUTH SHORE OF THE ENTRANCE TO THE RIVER, FROM CAPE ROSIER TO CAPE CHATTE.

This coast is bold and high, quite clear from dangers, and affords no harbour, or scarcely any shelter for vessels. The water is deep all along, and will not give any warning in approaching the coast, by the lead; it must therefore be guarded against during fogs, or in the night, more especially as the downward current of the river sets over to the south side from Cape de Monts.

The land generally rises from the water's edge into round high hills at the back, and the whole is covered with trees.

Cape Rosier is about two leagues to the northward of Cape Gaspé. It is a rugged, rocky point, and the shore to Cape Gaspé is very steep, with high perpendicular cliffs. To the S.W. of Cape Rosier, about a quarter of a mile, is a fine sandy bay, with good anchoring ground, decreasing in depth from 14 to 7 fathoms toward the beach, and sheltered from S.W. to N.W. winds. There are several fishing establishments on it, and in the vicinity.

Griffin's Cove is 6½ miles W.N.W. from Cape Rosier. The north point of its entrance is bluff, and it has several houses within it. It will afford shelter to small vessels with a west wind, but it is open to the north. Five miles further is *Great Fox River*, off which a vessel might anchor in fine weather: it may be known by the extent of the settlement on its banks, particularly on the southern side.

Great Pond River, or *Anse de l'Etang*, 16 miles N.W. ½ N. from Great Fox River, will afford shelter to shallops; it may be known by a remarkable high, wooded, conical hill on the east side, and by a beach with a few huts and stages on the west. Some of the people of the parish of St. Thomas, on the Rivière du Sud, 33 miles below Quebec, frequent this place during the cod-fishing season. The river issues from several lakes, one of which is only half a mile through the woods from the fish stages. Fishermen also frequent the *Grande Vallée*, or *Great Valley River*, the *Magdalen River*, *Mont Louis River*, *St. Anne's* and *Cape Chatte*, during summer; but there appears to be no permanent settlers, those of St. Anne excepted, until we reach Matane.

Magdalen River is a considerable stream, and in the bay, at the mouth of it, a vessel can anchor in fine weather, and sometimes schooners warp into the river itself. It is 24 miles from *Great Pond* and 16 miles from *Mont Louis River*, which is a much smaller stream; the small bay, into which it falls, affords anchorage to vessels nearer the east than the west side.

Cape St. Anne is 26 miles further westward, in the rear of which are the *St. Anne Mountains*, the highest of which is 14 miles behind Cape Chatte, and is 3970 feet above the sea; it is the highest land in British North America.

St. Ann River is 6 miles west of the cape, and can be entered by small schooners at high water. A few families are settled here, and also at *Cape Chatte River*, who willingly render assistance to such as require it.

CAPE CHATTE is a remarkable hummock, like a short sugar loaf, on a point which is lower than the land about it. Its extremity is in lat. 49° 6′, and long. 66° 45′ 19″. At about three miles to the S.E. of it is a small river of the same name.

The land over Cape Chatte is very mountainous, and is much broken at the top; hence it may be readily known, as there is no land presenting similar features in any other part of the river.

IV.—GENERAL DESCRIPTION OF THE RIVER.

"The River of St. Lawrence, and the whole country from the lowest parishes to Quebec, unfold scenery, the magnificence of which is considered to be unequalled in America, and probably in the world.

"It is impossible to travel along the road, near the river, without observing most evident traces of higher levels of the river than the present one; the rocks are actually worn as evidently as at the present high water mark; and many of the sharp points of the lower ones show, to conviction, that they were once small rocks in the St. Lawrence or the ocean; and that the now cultivated flat between the first ridge, being the river boundary, and the second ridge, formed, at no very remote period, a part of the St. Lawrence, or of the ocean.

"The southern shores are thickly settled by the descendants of the French, who, at different times, emigrated to Canada; and the manners and customs of their ancestors are tenaciously preserved. The villages and parishes have a general similarity of appearance; and although some of them are more extensive and much more populous than others, yet one description is sufficient for all. They assuredly seem to be the very abodes of simplicity, virtue, and happiness. In travelling, we pass along delighted through a beautiful rural country with clumps of wood interspersed, amidst cultivated farms, pastures, and herds; decent parish churches, and neat white houses or cottages. The inhabitants are not only civil, but always polite and hospitable. Beggary and the squalid beings of other parts of the United Kingdom are here unknown."

The first arrival at Quebec, in the season of 1833, was on the 9th of May; but it was not till the end of the month that the harbour exhibited its spring appearance of a forest of masts, or that the wharfs and streets of the lower town displayed that scene of activity which characterises it as a great commercial port.

In the vicinity of Gaspé the spring is commonly from a fortnight to three weeks later than at Quebec: and this is attributed, not so much to the increase of latitude, as to the proximity of the sea, with its ices. Here, on the 9th of June, 1833, the thermometer fell to the freezing point, with showers of snow and sleet, and a heavy gale from the north.

Some remarkable instances have been given of ignorant commanders venturing up the river, in thick weather, without sufficient precaution or taking soundings; and one was discovered who, by his reckoning, supposed himself by Cape Chatte, when he was actually 130 miles out of his reckoning, westward, in a space of 360, after having, four days before, seen the west end of Anticosti.*

THE NORTH SHORE FROM CAPE DE MONTS TO THE SAGUENAY RIVER.

The next projecting point, westward of Cape de Monts, is *Point St. Nicolas*, bearing W. by N. 17½ miles. Three miles N.E. by E. from this headland is *Havre St. Nicolas*, or St. Nicolas' Harbour: between these places, and 6½ miles eastward of St. Nicolas, is a little river, called GODBRET or GOODBOUT RIVER, where the Hudson's Bay Company have a trading post, and where, therefore, provisions may occasionally be obtained, but it affords no shelter. This place may be known by the fall of the land on the east, and clay cliffs on the west.

* In the description of the lower part of the river, with Gaspé Bay, &c., we have been considerably assisted by the instructions published by *Nath. Gould, Esq.*, chairman of the North American Colonial Association: to the same gentleman we are indebted for these remarks on the river in general.

ST. NICOLAS' HARBOUR.—At the entrance of this harbour vessels may occasionally find shelter from westerly winds. The land about it is mountainous; and, if a ship be to the westward of the harbour, and bearing up for it, the entrance may be distinguished from the circumstance of its having all the land on the west dry and barren, the wood being burnt from the mountains; but, on the east side, the mountains are green and covered with trees. To enter, run boldly in, between the burnt cape and the green one, steering North, and the low point, which forms the west side of the entrance, will appear like an island: this point has a wooden cross on it, which will be seen on steering toward it. The eastern side of the entrance is limited by a reef, one-quarter of a mile long, which stretches S.W. from the green cape; opposite to this reef, on the western side, is another; both dry at low water, but the largest is always to be seen. The anchorage is a little to the northward of the stream of the easternmost reef, in from 12 to 6 fathoms.

The distance between the points of the two reefs is about 1 mile; both are bold; 10 fathoms being close to the eastern, and 4 to the western, reef. Small vessels may haul alongside the rock, just within the entrance on the west side, in 10 feet at low water.

At about 100 yards within the cross above mentioned, a bar commences, which extends thence across the entrance, and has only 10 feet over it at low ebbs. This part is only two ships' length in breadth at low water, but the harbour widens inward to a large basin, where vessels can lie perfectly land-locked in from 10 to 12 fathoms of water, good ground, and on the S.W. side the water is deep close up to the rocks: this place is, however, a bad outlet for ships bound to the westward, as an easterly wind blows directly in, and the land around being mountainous, there is no getting in or out, in a square-rigged vessel, with canvas set.

Those who proceed to the basin, must keep their canvas set, and borrow close round the point on which the cross is erected; then shoot in as far as they can, and down with the anchor. To warp in, keep the western side on board.

The bank to the southward of the eastern reef, and all along the shore, is very steep; there is a depth of 50 fathoms at about 500 yards from it. Near the reef, in 20 fathoms, cod-fish are generally abundant.

At St. Nicolas' Harbour the tide flows, on the full and change days, at 1 h. 55 m. Spring-tides rise 12 feet; neaps 7 feet. The flood, of spring-tides, runs to the westward about two miles an hour, and thus along-shore up to the Saguenay River.

English Bay is 11¼ miles W.N.W. from Cape St. Nicolas. It affords no anchorage. On its western side is *St. Giles' Point*, opposite the north-eastern point of the Peninsula of Manicougan, and which is the termination of the bold and rocky coast to the eastward of it, while that to the west of it is low and wooded; and this circumstance will enable a vessel to ascertain her position on the coast, whether to the east or west of this part, and of her approach to the dangerous Manicougan shoals.

MANICOUGAN BAY and SHOALS.—This dangerous bay is 11 miles W. by N. from Point St. Nicolas. The shore between is bold and rocky; the land high, and the water deep. The flood-tide sets strongly into the bay, and the ebb strongly out. The land forming the western point of the bay is much lower than any other near it, and may be readily known by its yellowish sand and clay cliffs, with a fine beach, and very flat for more than two miles off.

The east end of the great shoal of Manicougan lies 11¼ miles West from Point St. Nicolas. This end is of rocks, terminating in a spit, and dries at low water. The S.W. point of the Bay, called Manicougan Point, is 17¼ miles W. by S. from Point St. Nicolas. From Manicougan Point the land thence westward trends in a curve, 12 miles, to *Outarde* or *Bustard Point*, at the mouth of the Outarde River, and the great shoal borders the whole, to the distance of 2¼ miles from shore. The tide of ebb and flood sets along its edges, but is not perceptible at more than 5 or 6 miles off shore; and on that part, off Manicougan Point, is a great ripple. On the shore, within the shoal, the tides ebb one mile from high-water mark, and heavy breakers are seen on its edges, with high reefs of rocks.

To the westward of the Land of Manicougan are the River and Bay of OUTARDE. The latter is terminated by *Point Bersiamites or Bersimis*, which is sandy and covered with trees, and the whole is lined with extensive and dangerous shoals. Ships, in rounding Bersimis Point, should advance no nearer to it than two miles, as the shoal surrounding it is steep-to.

Ships being up to Bersimis Point with the wind at west, and flood-tide, may cross over

thence to Father Point, and engage a pilot for the river. Should the wind be at S.W. by W., keep the north land on board until sure of fetching the point.

In Outarde Bay the ebb-tide is slack, and the flood strong. Ships may always get ground in the bay, but should stand in no nearer than two miles from shore.

The *Manicougan*, and *Outarde* or *Bustard*, are very large rivers, but unfortunately their navigation is much interrupted by falls at a short distance from the St. Lawrence. The water of the Outarde is entirely white, occasioned by large quantities of impalpable sand and clay being held in suspension; and the vessel, in sailing through it, by displacing the superficial stratum of lighter and fresh water, full of these earthy particles, leaves in her wake a dark blue streak, which may be traced as far as the eye can reach. This sand and clay are the deposit of the rivers, which, in the course of ages, have formed the alluvial peninsula of Manicougan, and also the dangerous and extensive shoals of the same name. The *River Bersimis* is navigable for small vessels as far as ten miles from the entrance, and it can be ascended to the falls, nearly 40 miles, but it would be difficult for a sailing vessel to reach as far.

Jeremie Island is 6 miles westward of Point Bersimis, the sandy coast extending between them. On the main, opposite the island, is a post of the Hudson's Bay Company, the houses of which may be seen very plainly from within the distance of 6 miles.

Cape Colombier is 5 miles westward of Jeremie, and off it is the *Gulnare Shoal*, discovered by Captain Bayfield in 1830. It is a narrow ridge of granite rock, nearly 2 miles long, parallel to the shore, and having from 2 to 3 fathoms over it at low water.

Baie de Laval is 8 miles westward of Cape Colombier. *Laval Island* is in the mouth of the bay, and all within it is dry at low water. Vessels may approach this bay to within 6 fathoms depth, but to the eastward, between *Wild Fowl Reef* and the Gulnare Shoal, the coast ought not to be kept closer than in 30 fathoms.

Port Neuf is another settlement of the Hudson's Bay Company, the buildings of which are readily seen. It may be known by a range of remarkable clay cliffs, like chalk cliffs, between it and the Baie de Laval, the only land of this appearance in the river, and which, therefore, is a sure mark.

Point Mille Vaches is 4 miles S.W. from Port Neuf; it is low and sandy, and the shoals off it contract the navigable breadth of the river, between it and Bicquette, to 11½ miles. The N.W. reef of Bicquette bears from the point S.S.E. ¼ E. 12¼ miles.

To the west of it is the *Baie de Mille Vaches*, which is filled with shoals of sand and rock, the western parts of which are deep and dangerous. The bay extends to the *Esquemin Isles*, 12 miles S.W. ¾ W. from the point.

The coast west of this is bold and free from danger, but has no shelter.

THE SAGUENAY RIVER enters the St. Lawrence between Lark Point on the west, and Point Vaches on the east, opposite Red Island, 23 miles westward of the Esquemin Isles.

This extraordinary river, which was imperfectly known till the late surveys, is as remarkable for the great volume of water which it brings down to the St. Lawrence, as for the enormous depth of its bed, which is fully 100 fathoms lower than that of the St. Lawrence. It comes from the Lake St. John, and at *Chicoutimi*, a trading post of the Hudson's Bay Company, which is 65 miles above its mouth, it becomes navigable, and 6 miles above which, to the rapids, the tide ascends. To *Point Roches*, 57 miles from the St. Lawrence, and 8 miles below Chicoutimi, it is navigable for the largest ships; and up to this part there is no danger in the river, the shores consisting of steep precipices, some of the headlands rising more than 1000 feet in height.

The current runs down with great force, the ebb-tide varying from 3 to 5 knots, according to the breadth of the river, which is from two-thirds of a mile to 2 miles. At the mouth of the river, this ebb-tide runs at the rate of 7 knots over Lark Islet Spit, and the S.W. extreme of Point Vaches.

TADOUSAC, which is in the entrance of the river, was formerly the principal post of the French, for trading with the Indians. It has declined, and now belongs to the Hudson's Bay Company.

The *harbour* is off the settlement, a mile within Point Vaches, and is well sheltered; but a heavy anchor should be cast close in-shore, on account of the eddies which sometimes set into it from the river.

Across the mouth of the river there is 18 to 20 fathoms, but immediately within, the depth increases to above 100. The current setting strongly over this bar, meeting with the spring ebbs of the St. Lawrence, cause breaking and whirling eddies and ripplings; and these streams opposed to a heavy easterly gale, cause an exceedingly high, cross, and breaking sea, in which no boat could live. On the flood at such times, there is no more sea than in other parts of the river.

To enter the Saguenay, have the beginning of the flood, and sufficient daylight to reach Tadousac. Winds from the S.W. southward to N.E., will take vessels into the river with the flood, but the N.E. is most to be depended on; but whether you approach from the S.W. or N.E., bring the western points of the Brandy Pots and White Island in one, and open to the southward of Hare Island, bearing S.S.W. ¼ W. Run upon this mark (and it will lead you well clear of the *Vaches Patch* and Lark Reefs, off the mouth of the river,) until *La Boule Point* comes in one with *Point Ilot*, bearing N.W. by W. ¼ W., which will clear the S.W. side of Point Vaches Reef; Point Ilot being the rather low N.W. point of the Harbour of Tadousac, and La Boule, a high and round-backed hill, forming a steep headland, 4 miles above Tadousac, and the extreme point seen on the same side of the river.

Haul in for the last-named leading mark, keeping the S.W. extreme of La Boule just open, which will clear all dangers; and when as far in as *Point Rouge*, bear towards the trading post, into the harbour, dropping your outer anchor in 16 fathoms, and the inner one close to, or within, low water mark.

THE SOUTH SHORE BETWEEN CAPE CHATTE AND GREEN ISLAND.

Between Cape Chatte and Matane, in a distance of 11 leagues, the shore is all bold and bound with rocks.

In proceeding up the river, after passing Cape Chatte, the first place of remark is *Matane River*, distinguished by a large square white house, and a long barn level on the top. This place may be known from within the distance of 3 miles, by its houses and a bluff cliff, close to the entrance on the western side. Many pilots live here. The River of Matane admits small craft only. The chief settlements occupy both banks, and extend about one mile from its mouth. The two remarkable mountains, called the Paps of Matane, stand inland to the westward of Matane River, and form the grand mark for this part of the coast. At 7½ leagues to the westward of Matane River, is the western point of Little Metis Bay, a spot surrounded by rocks, excepting the entrance, and in which small vessels may find shelter from westerly winds, in 3 fathoms at low water. The coast from Matane to Little Metis is entirely barren. *Little Metis* is situate on a long, low, flat, and rocky point, with several white houses, extending about a cable's length to the N.E. This is noticed as a guide to the anchorage at *Grand Metis*, which is 5 miles farther westward. On opening the bay, (say close in-shore,) a square house will be first observed, near the water side; a mile farther, in the S.W. corner, up the bay, in the same view, will be seen the upper part only of a house, which is the establishment of *Grand Metis*.

A vessel may close in with Little Metis Point into 6 or 7 fathoms of water, and run for Grand Metis, by the lead, in from 5 to 8 fathoms. Should the vessel be turning up, on the north shore, or in mid-channel, *Mount Camille*, which will be seen, should be brought to bear S.W. by S., which will lead from sea to the bay.*

The cove of Grand or Great Metis is nearly dry at low water. A small vessel may bring up here in 3 fathoms, with the wind from S.W., but with a west wind it affords no shelter. The points that form these coves are very low, and cannot be distinguished beyond the distance of 2 leagues. Great Metis has a large rock in the middle of the cove, Little Metis has none; and the latter may be known from the former, by observing that a round bluff rock lies at its entrance, on the eastern side; not far from which, on the east, is a small hill on the mountain, in the form of a sugar-loaf.

Grand Metis has risen into notice from the erection of saw mills. The mills are on a fall of the river, about three miles up. The river is a small stream, greatly impeded by rapids when not swelled by freshes; and it has been found necessary to dam it with wicker-work and mud for a considerable distance, to keep back water enough to float the logs down to the mill. From the mill the deals are floated down a *dall* or *trough* to the basin,

* *Mount Camille* is 6½ miles inland from the nearest shore. Its summit is 2036 feet above the level of the sea.

for shipment; ... of the distance being cut through soil and rocks 14 feet deep. The deals produced are spruce, and a very superior yellow pine.

At about half a mile from the *debouche* of the river is a rocky islet, forming a secure and picturesque basin. Over the sand bar, at the entrance of this basin, is a depth of 14 or 15 feet at low water, and ample room for two vessels to lie stem and stern of each other. The passage in is buoyed.

The tide here, on the full and change, flows at ten minutes past two o'clock, and rises from 12 to 14 feet.

With a ship of great draught it is advisable to lie in 6 fathoms at low water, with the house at the east side of the River Metis open to the eastward of the islet in the bay, so that the river may be seen between them. *The high land of Bic will then be just clear of Cape Orignal*; some of the houses of Little Metis will be seen, and Mount Camille will bear S.S.W.; in such a mooring the swell is broken before it comes in by the shore. The ground, being clay, is excellent for anchorage; and, with one anchor to the eastward, and another to the westward, the vessel will ride in perfect security.

From hence, along the shore, will be observed, at great distances, the small white houses of the inhabitants, which are mostly occupied by pilots or fishermen, who have cultivated small patches of land around them. Occasionally, when, from a wet summer, the harvest of the westward has failed, these small farmers reap a benefit by the greater backwardness of their seasons.

Between Great Metis and the next inlet, named *Cock Cove*, will be seen the high land of Mount Camille. The bearing and distance between the Coves are W. by S. 3½ leagues; and, from Cock Cove to the projecting land of *Father Point*, W. ¼ S., 4½ miles. Here will be seen a number of houses; this place being the regular rendezvous for the pilots.

Barnaby Island presents nothing remarkable. A reef extends from each end of it, under which small vessels may find shelter. Between the island and the main the bank is dry at low water, but there is a depth of 14 feet over it at high water of spring-tides. With neap-tides only 9 feet. At the little *River Ottey*, 5 miles S.W. from Barnaby Island, fresh water may be obtained.

At a distance of 3 miles to the westward of the Ottey, the coast forms the *Harbour of Bic*, which affords shelter to small vessels from westerly winds. Two round islets mark the eastern side of it, and it is one mile from them to the western side of the harbour. The anchorage is midway between these and the west side, in 3 fathoms, the western point bearing west.

Nearly 3 miles west from Bic Harbour, and at the same distance south from Bic Island, is *Cape Orignal*, or *Arignole*. From this cape a reef extends one mile E. by N.

The *high land of Bic* lies S.W. by S., 2½ miles from the N.W. extremity of the cape; it is very remarkable when seen up or down the river, as it consists of high and narrow ridges, parallel with the coast, the summit being 1234 feet above the sea.

The ISLE BIC is of moderate height, and covered with trees. This island is 3 miles in length, from east to west, and reefs extend from it to the east, west, and north. At three-quarters of a mile from the north side, is the islet called *Bicquette*, which is also woody. Bicquette is quite bold on the north side, and there are 30 fathoms at a musket-shot from it; but within the extent of a mile and a quarter to the west of it is a chain of reefs, which are dangerous. Between Bic and Bicquette there is a passage, but it is intricate; there are no marks for it, and it will be best understood from the chart.

A lighthouse has been erected on the west end of the island of Bicquette, in the River St. Lawrence, and a *revolving light* of the first class was shown thereon for the first time, on the 9th August, 1844; and the light will continue to be shown every night from sunset to sunrise, from the 15th April to the 15th December, in each year. The tower is 70 feet high, and the light stands 130 feet above the level of the sea, the north-west reef bearing from it due West, 1¼ mile. This light will revolve at regulated intervals of two minutes.

A nine-pounder gun is placed near the lighthouse, and will be fired every hour during foggy weather and snow storms.

The *S.E. Reef* extends 1¾ mile E. by S. from the S.E. point of Bic Island, and the channels between the rocks and the island should not be attempted.

The *N.E. Reef*, a small patch of black rocks, lies N. W. ¼ W. above a mile from the former, and 400 fathoms N.E. by E. from the N.E. point of the island.

The *West Grounds of Bic* are an extensive flat of slate, which partly dries at low water, the outer point of which is three-quarters of a mile W. ¼ S. from the west point of the island.

The Alcides Rock, on which the ship of that name struck in the year 1760, has only 4 feet over it, and bold-to. This rock lies at a mile and three-quarters from the shore, with the west end of the Isle Bic bearing N.E. 3¾ miles, and Cape Orignal E. ¼ N. 4¾ miles. Ten fathoms of water lead to the northward of it.

At a mile and a half from shore, and 14¼ miles S.W. by W. ¼ W. from the west end of Bic, lies the N.E. of two islets called the Razades; these are two large rocks always above water. They bear from each other nearly S.W. and N.E., one mile and a half distant. Ten fathoms of water lead to the northward of them.

Basque Island, a small narrow isle, extending one mile and a quarter E.N.E. and W.S.W., bears W.S.W. 5 miles from the N.E. Razade, and S.W. by W. ¼ W. 20 miles from the west end of Bic: it appears round; is bluff, and covered with trees. There are no houses on it; extending to the N.W. from its west end, is a ledge of rocks, dry at low water, and steep-to.

Apple Isle, a narrow barren islet, with rocks, lies at 3 miles W.S.W. ¼ W. from the west end of Basque, and 2¼ miles from shore. Between it and the land there is no passage.

GREEN ISLAND.—This island, with the reefs that project from each end of it, is 2¼ leagues in extent from N.E. by E. to S.W. by W. Two families reside upon it. The most remarkable object on it, is a lighthouse which stands on its northern side, at about 1¼ mile from the N.E. end, and which shows a fixed light at 60 feet above the level of low water mark.* The bearing and distance of Basque Island from the lighthouse, are E.N.E. ¼ E. 8¼ miles: and from the lighthouse to the extremity of the S.W. reef of Green Island, S.W. by W. 5¼ miles. There is no other danger on the north side of the island than a dangerous reef, which extends from the lighthouse 1¼ mile N.N.E. ¼ E. This ledge is a reef of rocks which are steep-to, and covered at high water of spring-tides. The other part is steep-to and rocky.†

The ledge of Green Island, Basque Island, and the high land to the southward of Cape Orignal, in a line bear E.N.E. ¼ E.

To ships, on coming up and going down the river, the lighthouse appears like a ship, and very conspicuous. In the night the light may be distinctly seen at the distance of five leagues.

The reef from the west end of Green Island dries to the distance of a mile from the island. The westernmost part is detached from the body of it, and the tide sets through the interval toward Cacona. This part is covered at a quarter flood.

THE DESCRIPTION OF THE RIVER CONTINUED.

Red Island lies in the middle of the estuary, off the mouth of the Saguenay River, and bears N.W. by W. ¼ W. nearly 5¼ miles from the lighthouse on Green Island. It has a low, flat islet, of a reddish colour, without trees, and partially covered with grass. The reef, which extends 2¼ miles to the N.E. and is 1¼ mile wide, is nearly dry in some parts at low water; the eastern extremity of this reef bears nearly N.W. by N. from the lighthouse. The depth decreases gradually on its eastern end, but the islet is bold-to on the S.W. The eastern end of the reef is quite cleared by keeping the lighthouse and beacon on Green Island in one, bearing S.S.E. ¼ E.‡

* This lighthouse, according to an official notice, dated 21st Sept., 1809, will exhibit a light, nightly, from sunset to sunrise, from the 15th day of April to the 10th day of December, inclusive. *From the lighthouse* the extremity of Green Island Reef bears N.E. by N. one mile and a quarter; and the extremity of the shoal at the west end of the island, S.W. by W. 6¾ miles; Apple Isle, E.N.E. 5 miles; the islet called Red Isle, in the middle of the river, N.W. by W. ¼ W. 5¼ miles; and the Brandy Pots, near Hare Isle, S.W. by W. ¼ W. 15 miles.

† The *Archduke Charles*, transport, from Quebec, having on board six companies of the Nova-Scotia militia, was wrecked on one of the reefs, and eight persons perished, *May*, 1816.

‡ The *Minstrel* brig, Capt. Outerbridge, which sailed from Limerick, 21st April, 1841, with 141 passengers, emigrants to Canada, struck on Red Island Reef, May 18th, at 4 a. m. A heavy sea was then running, and more than a hundred passengers embarked in the boats, when the vessel heeled into deep water, and instantly went down stern foremost. All in the boats perished, with the brave and worthy captain, except four of the crew and four passengers. The survivors reached White Island, whence they were taken off by Captain M'Intyre, of the Wellington, and conveyed to Grosse Island.

LARK REEF, on the north side of the River, lies opposite to the western point of Green Island, bearing N.W. 8 miles from it, contracting the navigation of the river to this breadth. It is at the S.E. extremity of a shoal, extending from *Lark Point*, the western point of the entrance of the Saguenay River, as before described, and which bears N. by W. 3 miles from it. The space between it and the shore dries at low water, nearly out to the point; this can be avoided, as well as those to the N.E. of it, lying off the mouth of the river, by keeping the western sides of the Brandy Pots and White Island in one, and open to the southward of Hare Island, bearing S.S.W. ½ W.; but this mark is distant, and cannot always be seen.

The NORTHERN SHORE of the River, from the Saguenay to Coudres Island, is bold and mountainous. The granitic hills in most parts rise immediately from the river, forming steep precipitous headlands. Near the entrance of the Saguenay these hills are not above 1000 feet high, but those of the Eboulemens attain an elevation of 2547 feet above the tide-waters of the river.

CAPE BASQUE is the first mountainous headland S.W. of the Saguenay, bearing S.W. ½ S. 6½ miles from Lark Point; and about 1¾ mile northward of it is the *Echafaud du Basque*, a small rocky islet in the mouth of a cove, and bearing 4½ miles W. by S. from the S.E. extreme of Lark Reef, the shoal of which extends as far as this place.

BASQUE ROAD is a well-sheltered anchorage lying off this, the best position being with the Echafaud bearing W.N.W. rather less than a mile distant, in 10 or 11 fathoms over clay bottom.

Bay of Rocks is about 2½ miles south-westward from Cape Basque, and affords shelter only to boats. *Cape Dogs*, 5½ miles S.W. ½ S. of Cape Basque, is quite bold and high; and similar to it is *Cape Salmon*, which is S.W. ¼ S. 9¾ miles distant from it. Further to the westward, about 1½ mile, is *Port Salmon*, which, like *Port Parsley* and *Kettle Port*, to the eastward, are only boat harbours. The settlements are nearly continuous on the banks from hence to Quebec.

Cape Eagle is 5¼ miles S.W. by W. ½ W. from Cape Salmon, and is of the same character.

MURRAY BAY is 6½ miles W. by S. from Cape Eagle; it is a beautiful place. The bay is 1½ mile wide, and nearly as deep, and a rapid and unnavigable river falls into the head of it, on which are several grist and saw mills. The bay is nearly all dry at low water, except the shallow channels leading to the river. Vessels occasionally anchor off the bay, with *Point Gaze*, its east point, bearing W. by N. about 400 fathoms, *Point Pies*, its west point, S.W. ½ W., and *Point Heu* E.N.E. ½ E.

The River at this part, between the Saguenay and Cape Eagle, is divided into two channels, by the Red Island and bank above described, and the shoals and reefs extending in a line along the middle of the river, at each end of Hare Island, in a N.E. and S.W. direction.

The NORTH CHANNEL, though not that which is generally used, is clear, deep, and broad, and might be used advantageously under proper circumstances, as in the case of scant and strong N.W. winds; but with easterly winds and thick weather, or at night, it must not be attempted, as there would be no leading marks, and the depth is too great and irregular to afford any guidance, besides the want of shelter or anchorage on the north shore.

WHITE ISLAND, on Hare Island North Reef, is covered with trees, and bears from Red Island S.W. ¼ W. nearly 10 miles, and from the N.E. end of Hare Island N.E. ½ N. 1¾ mile. A shoal of rocks extends from White Island N.E. ¼ E. 3 miles, and dries to the greatest part of that distance. Between the N.E. end of this shoal and Red Island, 6½ miles distant, the channel is quite free from danger.

HARE ISLAND, &c.—The east end of this island lies S.W. ½ S. a mile and a half from White Island; thence it extends 7¼ miles to the S.W., and is in no part one mile in breadth: in a great part not half a mile. It is 250 or 300 feet high, and thickly wooded.

At S. by W. one mile and a half from the N.E. end of Hare Island, lie the three islets called the BRANDY POTS and NOGGIN. The northern Brandy Pot, high and covered with trees, is close to the southern one, and the bottom between it is dry at low water. The southern is a whitish rock, almost barren, the wood being nearly burnt off. The *Noggin*, which lies to the N.E. of the northern Brandy Pot, is likewise covered with trees. At low water these islets are connected by a chain of rocks, leaving a passage for a boat only. Half-way between the Noggin and the N.E. extremity of Hare Island, at half a mile from

shore, there is also a reef, dry at low water; but all these are out of the fair-way. The depth of 7 fathoms leads clear of them.

To the south-westward of the Brandy Pots the south side of Hare Island has a flat of hard ground extending from it, three miles in length, and about one-quarter of a mile in breadth. The whole of this side of the island is bound with rocks.

HARE ISLAND BANK.—This is an extensive shoal lying above, and nearly in the direction of Hare Island. It commences at about a mile S.E. from the S.W. end of the island, and extends thence S.W. by W. and S.W. nine miles. There is good anchorage on its south side, in 7 fathoms. On its northern side is HARE ISLAND SOUTH REEF, the greatest portion of which is uncovered at low water, to an extent of 2¼ miles; the part always uncovered is clothed with grass and spruce-bushes, lying 2¼ miles to the S.W. of Hare Island. The western extremity of this reef bears from that of Pilgrims N.W. by N. 3¼ miles; and the eastern end is nearly north 4¼ miles from the same. Off the east end of the bank, about a quarter of a mile distant, is a small rocky 2-fathom *Knoll*, on which White Island will be just shut in behind the south side of Hare Island; and at two-thirds of a mile from the east end of the bank is a 3-fathom *shoal*, on which White Island will be midway between the Brandy Pots and Hare Island.

The SOUTH CHANNEL, between these banks and the south shore of the river, is justly preferred for the common purposes of navigation. The tides are not so strong, nor the water so inconveniently deep, as in the channel on the north side of the river: it has good anchorage in every part, and a sufficient depth for any ships.

The breadth of the channel, in its most contracted part, between Hare Island Bank and the Pilgrims, is two miles, and its greatest depths 7, 8, 10, to 13, 15, and 16, fathoms, mud, sand, and gravel.

BARRETT LEDGE.—The reef thus called is composed principally of two detached rocks, on the south side of which is a black buoy. This buoy lies with the northern extremity of the main land within Green Island, in a line with the northernmost high land of Cape Orignal, bearing N.E. by E. ½ E.; the summit of the southernmost mountain of the high land of Kamourasca in one with the south point of the Great Pilgrim Island, S.S.W. ¼ W.; the eastern side of the trees on Hare Island in one with the west cape of the Bay of Rocks, (on the north shore,) N.W.; and two houses near the Rivière du Loup, S.S.E. ½ E.; the latter are the only two houses between the church and Rivière du Loup.

The rocks of Barrett Ledge bear from each other N. 63° E. and S. 63° W. one-quarter of a mile. The N.E. rock has 10 feet over it; the S.W. has 12. Between them is a depth of 7 and 8 fathoms.

At a mile S.W. from the S.W. side of Barrett Ledge, lies a small bank of 10 feet, called the *Middle Shoal*, with the Brandy Pots bearing N.W. ¼ W. distant a mile and a half. Near it on the N.E. are from 6 to 8 fathoms of water. This shoal appears to be the extremity of the remains of a narrow *Middle Bank*, extending thence two leagues S.W. by W., and upon which there are still from 4 to 3½ and 3 fathoms, on approaching to the Hare Island Bank. In the channel between the Middle Shoal and Brandy Pots are from 10 to 18 fathoms of water: but in that to the southward the general depths are 7 and 8 to 5 and 4 fathoms.

On the SOUTH SHORE of the River, the first point westward of Green Island, is the remarkable rocky peninsula of CACONA, lying S.S.W. from the S.W. end of Green Island. At a mile and a half south-westward of Cacona, and just to the northward of the stream of it, are the *Percée Rocks*, two clusters, occupying the extent of a mile and a half. They lie at about one mile from, and parallel with, the main, and are nearly covered at high water. On the south side of them there is a narrow 3½-fathom channel: the depth of 10 fathoms leads clear on the north; and Green Island and Cacona just touching, and bearing N.E. ½ E., will keep 3 fathoms depth on their north side.*

The PILGRIMS.—Five islets, called the PILGRIMS, lie at the distance of 14 miles above the peninsula of *Cacona*, at a mile and a half from the shore. They occupy an

* On the main land, within Basque Island, is the settlement of *Trois Pistoles*; on the same side, within *Green Island*, are the church and village of that name: and at five miles from the latter are the promontory and parish of *Cacona*: next above which, opposite to Hare Island, is the *Rivière du Loup*. "These settlements do not extend far beyond the river or front range, which exhibits neat farm-houses, large barns, and extensive enclosures, bearing evidence of a good soil and industrious cultivation."

tent of 4½ miles N.E. by E. and S.W. by W., and are based upon the *Banc du Loup* (or Wolf Bank), extending from shore above the river of the same name, and on the exterior part of which the depths are 2½ and 3 fathoms. They are connected by reefs that dry at low water. The easternmost is the highest, and is covered with trees; the others are barren, and of a whitish colour. They are bold-to on the north side, but there is no passage for shipping between them and the shore.

From the N.E. or Great Pilgrim the Brandy Pots bear N.N.E. 7½ miles, and the S.W. end of Hare Island N.W. by N. 4½ miles. Hereabout the ebb runs downward at about 3 miles an hour.

Without the edge of the *Banc du Loup* is a sand-bank, called the *Pilgrim Shoal*. It is narrow, but 4 miles in length, and its general depths 13 and 14 feet at low water. A depth of 7 and 8 fathoms clears it on the north side.

KAMOURASCA ISLES.—This is a group of narrow islets, lying at the distance of two leagues above the Pilgrims, on the same side of the river. The N.E. or *Grand Isle* bears from the Pilgrims S.W. by W. The bank between is steep-to. The island next to the Great Island is *Burnt Island*, and the third of the larger isles is *Crow Island*. These isles are about three miles in extent, and one or two from the shore; the bank within is dry at low water. Great Island and Burnt Island are very steep on the north side, but Crow Island is surrounded with shoal water.

The settlement of KAMOURASCA is within the islands above described. Its church bears N.E. nearly a mile from Crow Island. From the latter, *Cape Diable* bears S.W. ½ W. about three miles, but a long reef extends from the cape toward the island, the easternmost part of which is covered at a quarter flood, and is little more than a mile from Crow Island. Two miles above Cape Diable is *Point St. Denis*; and a small cove on the south of this point. From Point St. Denis to Point Oval (*Ouelle*), the land trends irregularly six miles to the S.W.*

On the extremity of a shallow bay, at six miles westward from St. Anne's, stand the village and church of St. Roque. The country between is occupied with settlements, and an extensive mud-bank, with large scattered stones, uncovered at low water, extends in front of it. This mud-bank is included within the greater bank of sand called the *Shoals of St. Anne* and of *St. Roque*, extending more than a third over the river, from the southern shore, and limiting the channel on the south side.

Opposite to Point Ouelle, on the north side of the river, is *Cape aux Oies*, or *Goose Cape*, which is bold and rocky, forming the western extremity of MAL BAY; *Point au Pies*, on the west of Murray Bay, 9½ miles N.E. ½ N. from Goose Cape, being the eastern extremity. Mal Bay is formed by a slight incurving of the coast; shoals extend a quarter of a mile off shore, and there is no good anchorage in it.

Cape Martin is three miles W. by S. from Cape aux Oies; between them is good anchorage, and about midway is a large stone called the *Grosse Rock*.

Vessels anchor in 7 fathoms, the Grosse Rock, bearing N.W., being here sheltered from the tides, which run past Goose Cape with great rapidity, and occasion at times a strong rippling.

* The Parish of *St. André*, or *St. Andrew*, with its church, are on the main-land above the Pilgrims. Hereabout the land rises very near the river, in a steep ascent, to an elevation of from 150 to 200 feet.

Hence to Kamourasca, a distance of about nine miles, the country is diversified by abrupt and insulated hills, whose craggy and almost barren faces are generally contrasted with well-cultivated fields.

Kamourasca is a populous village, celebrated for the remarkable salubrity of its atmosphere, and is now the chief watering-place of Lower Canada; as such, it is the resort of numerous visitors, of the first rank and respectability, during the summer months. Here are a few shops, and several good taverns.

The next respectable village is a beautiful one on the *River Ouelle*, which likewise has its church and very neat dwelling-houses, &c.

The church of St. Anne stands at about a mile inland, 3½ miles south from the mouth of the Ouelle.

Insulated cliffs characterise the scenery about Kamourasca. They are composed of granite, and generally rise in abrupt slopes, presenting rugged faces, thinly clad with dwarf trees. The highest of these hills is the *Montagne Ste. Anne*, which peers above a fine country at its base. To the west is the settlement of *St. Roque des Aunais*; and to the southward trends a bold but not very high ridge skirting the most luxuriant fields. At the eastern base of the mountain, very agreeably situated upon an eminence, are the small village of St. Anne, the parish church, the parsonage house, and a large stone college, three stories high, on an elevated and salubrious spot.

ISLE AUX COUDRES is opposite to Point St. Roque on the south shore; and at this part the navigation of the river upward becomes intricate, from the numerous banks and islands which form the Traverses and numerous other channels.

The island is 6 miles long and 2¼ wide; its eastern end is 2¾ miles S.W. from Cape Martin. The island, being cultivated, has a pleasing aspect; it has as many inhabitants as it can support, having been settled at an early period. Its south shore is lined with rocks and shoals, extending a mile out from it. Its north side is bold, and *Prairie Bay* affords excellent anchorage. There is a reef of rocks running off the N.W. of the island, which are all covered at high water. The bearings from the end of the ledge are, St. Pierre Church in St. Paul's Bay just open, bearing N.W. ¼ N.; *Cape Corbeau*, the east bluff of St. Paul's Bay, N.N.W. ¼ W.; the waterfall on the north shore, N.N.E. ½ E.; the bluff point of the island, S.S.E.; and the N.E. bluff point of the same, off which is a reef of rocks, E. ¼ N.

The NORTH CHANNEL to Quebec is to the north of Isle aux Coudres, and runs along the high northern shore of the river; and on the south side of it is the line of shoals, which extend from the west side of Isle aux Coudres to Burnt Cape Ledge and the Bayfield Isles.

The MIDDLE CHANNEL is to the south of the Isle aux Coudres, the entrance being between it and the Middle Ground, whence it runs westward along the shoals between it and the Seal Islands, and to the north of Goose and Canoe Islands, into the South Traverse.

The SOUTH TRAVERSE, that which is generally used by vessels at present, is along the south side of the river.

SOUTH TRAVERSE.—*The entrance of the South Traverse* lies between a buoy, chequered black and white, on the edge of St. Anne's Bank, on one side, and the bank called the Middle Ground on the other. The narrowest part of the channel is indicated by a light-vessel, stationed at nearly 5 miles W.S.W. from the chequered buoy of St. Anne's, and which is to be left, on sailing upward, on the larboard or south side.

At nearly a mile W. by S. above the light-vessel is a white buoy on the Middle Ground, to be left on the starboard side; and, at the same distance S.W. by S. is a black buoy on the larboard side. The passage between these buoys is only half a mile broad, and this is the most intricate part of the navigation in the river. The courses up, from these buoys, to abreast of a red buoy, on the edge of the southern bank, that of *St. Jean*, are S.W. ¼ S. 4 miles, and S.W. by S. 2 miles, whence you enter the South Traverse, distinguished on the north side by a rocky islet, named the STONE PILLAR, or *Pilier de Pierre*, which is always above water, and a quarter of a mile in length, at 2¾ miles from the south shore.*

A *revolving light* has been shown from the tower lately erected on South or Stone Pillar, since the 28th September, 1843, during the season of the navigation. This light will revolve at regulated intervals of 1½ minute.

About 2½ miles north-westward of the Stone Pillar is a 3-fathom shoal, called the *Channel Patch*, lying in the mid-channel, and below it are several other patches, with from 2½ to 3 fathoms. The marks for the Channel Patch, which may be passed on either side, are the north sides of the Goose Island Reef and of the Stone Pillar in one, bearing S.W. ¼ W., the latter being distant 2½ miles; the north side of Goose Island (including the islands close off it) and the south side of the Wood Pillar in one, bearing S.W. by W. ¼ W.; and lastly, St. Jean Church S.E. ½ S. 2¾ miles.

The *Avignon*, a half-tide rock, round on the top, and dry at three-quarters ebb, lies at the distance of two cables' length S.E. from the body of the South Pillar, with a depth of 7 fathoms close to it.

The PILIER BOISÉ, or *Woody Pillar*, a high round rock, with trees on the western part of it, lies at a mile and a quarter to the west of the Stone Pillar. At half a mile to the east of it is a rock, called the *Middle Rock*, dry at half-ebb.

To the northward of the Piliers or Pillars are the *Seal Reefs*, composed of sand and shingle on slate, and having an extent of nearly four miles N.E. by E. and S.W. by W. To a considerable extent the rocks which form these reefs are dry at low water. The bank on which they lie is extensive on the N.E. toward Coudre Island.

* Captain Bayfield says that the four buoys of the Traverse are laid down in every spring, and taken away in every autumn, at the close of the navigation. They are never laid down two years following in exactly the same place, from not being placed by angles, but they are always sufficiently near it to answer the purpose required.

At a mile and a quarter S.W. from the Pilier Boisé lies the extremity of a reef extending thence to *Goose Island*; and at a mile and a quarter S.W. ½ W. from the Stone Pillar is the commencement of a ledge of high rocks, called the *Goose Island Reef*, extending thence 2½ miles S.W. ½ W., the western part of which is composed of rocks always above water, and steep-to on their south side.

GOOSE ISLAND.—We have now advanced to *Goose Island*, connected by low meadow land to *Crane Island*, the whole of which occupies an extent of ten miles in a direction N.E. ½ E. and S.W. ½ W. The South Traverse continues on the south side of this island; but is impeded by several shoals of 12 and 15 feet water, which require great caution.

A farm-house may be seen on Goose Island, to the eastward of which, and close to low-water mark, is a large rock called the *Hospital Rock*. Two miles and a half to the westward of this rock is a long reef, dry at low water, but it is out of the fair-way, and close along the island.

The north side of Crane Island is in a good state of cultivation. On drawing toward it you will see a farm-house (Macpherson's) on the east end. To the S.E. at half a mile from this house, is the edge of the *Beaujeu Bank*, a narrow shoal which extends two miles thence N.E. ½ E., and having, on its shoalest part, only 12 feet at low water.

Two new buoys have been placed to mark the channel between Beaujeu's Bank and Crane Island, viz.—

A *white buoy* on the shoal off the south side of Crane Island, in 3½ fathoms low water spring tides, Mr. Macpherson's house bearing North half East, distant one-third of a mile, and the south side of Crane Island bearing South-west by West; this buoy bears West half North from the black buoy on the south-west end of Beaujeu's Bank.

Another *white buoy* on the south edge of Goose Island shoal, in 4 fathoms low water spring-tides, about 2 miles below Mr. Macpherson's house, Onion Island, bearing North-west, and the south side of Crane Island bearing South-west ½ West.

Whereby a clear channel will be left of nearly ½ mile, between the black buoy and the above white buoys, carrying 4½ fathoms, and which will allow ships, at dead low water spring-tides, to pass up or down without having occasion to anchor to wait for water over the flats to the southward of Beaujeu's Bank.—(May, 1844.)

On the south shore, opposite to the N.E. end of Goose Island, are the settlement and church of *L'Islet*, and at seven miles higher are the cape and village of *St. Ignace:* between are numerous settlements, and a shoal bank extends along shore, which is a mile and a half in breadth, thus narrowing the channel-way to the breadth of a mile.

BAYFIELD ISLES.—To the west of Crane Island is a group which may, with strict propriety, be called the *Bayfield Isles*, in compliment to the gentleman by whom they have been so excellently surveyed. Exclusive of a number of smaller islets and rocks, the principal isles are, *Canoe Isle*, on the north side of Crane Island, *Marguerite* or *Margaret* to the west, *Grosse Isle*, and *Isle aux Reaux*, otherwise Rat Island, and the *Isle Madame*. The whole, between Crane Island and the Island of Orleans, occupies an extent of 14 miles. There are several passages between the isles, but they are too intricate to be understood without reference to the chart.

From the west end of Crane Island a reef of rocks extends to the W.S.W. about half a mile, and a spit of sand, of 9 to 12 feet water, a mile and a quarter thence, in the same direction. From the S.W. side of Margaret Isle there is likewise a bank extending in a S.W. direction, the extremity of which is marked by a *red buoy*. On the north side of this island is a good roadstead, with 8 fathoms of water, lying about a mile to the east of Grosse Isle. You enter from the southward with the red buoy above mentioned on the starboard, and a white buoy, three-quarters of a mile farther north, on the larboard side; the course in being N. by E.

Grosse Isle,* which has a farm near its N.E. end, is about 150 feet in height; and the next isle, *Reaux*, which is long, narrow, low, and covered with trees, has one near its west end. The *Isle Madame* is also low, covered with trees, and has only one habitation. The last two isles are wholly on a base of rock, and from the S.W. end of Madame the bank extends 2½ miles to the S.W., and thus forms the western entrance of the *Northern Traverse*,

* "Off this island, as the law now stands, ships are obliged to anchor; from whence, after examination, they are allowed to proceed to Quebec, if not detained at the quarantine anchorage."

on the eastern side of the Island of Orleans. A ship should not approach it nearer than in 7 or 8 fathoms.

On the SOUTHERN LAND, above the Beaujeu Bank, will be seen, in succession, the churches of St. Ignace, St. Thomas, Berthier, St. Vallier, St. Michael, and Beaumont. A large tract, in the vicinity of the Rivière du Sud, is in so high a state of improvement, as to be considered as the granary of the province. The western side of this river is distinguished by the respectable village of *St. Thomas*, and the country about it is very fine, exhibiting churches and villages; the houses, being generally whitened, are pleasingly contrasted by the dark thick woods on the rising grounds behind them, the boundary of view beyond which is a distant range of lofty mountains.

From the Land of St. Thomas a bank extends more than half-way over toward Crane Island. Its northern extremity is a mile and a half S.W. by W. from the south point of the island. The bank is partly dry at low water.

The WYE ROCK lies immediately above the Bank of St. Thomas. This reef is about one quarter of a mile in length, in the direction of S.W. by W. It has only 3 feet over its west end, and 6 feet over the east end. The west end lies with the Seminaire of St. Joachim, a large building, with a tinned cupola and cross, on a rising ground near the water; on the north side of the river, just shut in with the east end of Reaux Island, and bearing N. 50° W. Its distance from the nearest shore is rather more than half a mile.

On the SOUTH SHORE, at 6½ miles above the Wye Rock, and W.N.W. from Berthier church, lie the BELLE CHASSE ISLETS, two remarkable large rocks. They are situate three-quarters of a mile from the shore. The ground, all the way up from St. Vallier Point to Quebec, is foul and unfit for anchoring.

ST. VALLIER CHURCH bears from that of St. Jean, or St. John, on the Island of Orleans, S.E. distant about three miles.

The BEAUMONT REEF, opposite to the point of St. Laurent, or St. Lawrence, on the Island of Orleans, is a large rocky bank, extending more than half-way over from the south shore. It is dry at low water, uneven, and steep-to on the north side, having 14 fathoms close to it.

The MIDDLE CHANNEL lies between the shoals and islands which form the northern side of the South Channel, and the long line of shoals and reefs, which extend from Coudres Island to Reaux Island, at the east end of the Island of Orleans. The entrance of the MIDDLE TRAVERSE, to the north of the Seal Islands, has not more than three fathoms at low water; but having passed this shallow part, there is depth and room enough for the largest ships, until we arrive at the Bayfield Islands, where the Middle Traverse communicates with the South Traverse by various narrow passages between the islands. There is plenty of water at all times in most of these passages, which will be best understood by referring to the chart, but the tides set strongly through them; and though it would be possible to take even the largest ships up to Quebec by the Middle Channel, were it requisite from any cause to do so, yet they are too intricate and difficult for general navigation.

The NORTH CHANNEL is a fine channel, and although not so convenient for the purposes of navigation as the South Channel, which is the most generally used, still it may be of service at times, as it frequently remains open, or free from ice, some time after the South Channel becomes unnavigable in the fall of the year.

The western entrance to this channel is between the reefs, which extend a mile to the E.N.E. of the N.E. of Coudres Island and the coast at *Les Eboulemens* (land-slips), where there is a large settlement. The mark to clear the shoals, on each side this part of the channel, is Cape Goose and Cape Martin in one.

ST. PAUL'S BAY is opposite the west end of Coudres Island. It is shoal and rocky, with a great ripple at some distance off, around Cape Corbeau. Its western point is called *Cap de la Baie*, and shoals of mud and large stones extend off it for three-quarters of a mile, and which also extend for 11½ miles to the south-westward at an equal distance.

After clearing the N.W. reef of Coudres Island by the before-mentioned marks, there is a fine straight channel from 1¼ to 2¼ miles broad, entirely free from danger, and extending 18 or 19 miles to the Burnt Cape Ledge. The depth does not exceed 17 fathoms, and there is good anchorage towards the sides, out of the strength of the tides, which run stronger and with more sea in this long and open reach than in the South Channel.

The southern side of this channel is a bank, extending, as before mentioned, from Coudres Island to Burnt Cape Ledge. Its edge is nearly straight, and is easily followed.

The *Neptune Rock* is nearly 15 miles S.W. from Coudres Island, within the edge of this southern shoal, and is easily recognised.

The *North Shore* is high, but the shoals extending three-quarters of a mile from *Cap de la Baie* and *Petite Rivière* will be cleared by keeping the extreme western capes, Rouge and Gribanne, open to the southward of Cape Maillard, which is 3 miles S.W. of the church of Petite Rivière. *Abattis* is a landing place, 1¼ mile S.W. of Cape Maillard; and at the *Sault au Cochon*, 2 miles farther S.W., the shoals, which line the shore, cease. There is only one landing place, *La Gribanne*, between Abattis and Cape Tourmente, a distance of 11 miles. To the westward of the *Sault au Cochon* the mountainous and uninhabited coast is quite bold, the high and precipitous capes, of various granitic rocks, being washed by the river as far as Cape Tourmente, where the Seminaire Bank commences, and the mountains trend to the N.W. away from the shore.

Burnt Cape Ledge is nearly opposite Cape Brulé on the north shore, from which it is distant 1½ mile. The S.W. end is always above water, and is 4½ miles S.W. from the Neptune Rock.

The *Brulé Banks* are to the westward of the former, and are joined to it by shoal water. Their northern edge is only 600 fathoms wide and from 7 to 10 deep. The banks form a bay on the south side, but which has no passage through to westward. This must be taken care of, and the north shore of Capes Brulé and Tourmente kept on board on nearing them. On the N.E. point of the Brulé Banks, in 3 fathoms, the west end of the Burnt Cape Ledge is in one, with the east side of Heron Island bearing S.E.

The *Traverse Spit* lies between the Brulé Banks and the eastern point of Orleans Island, its N.E. part forming, with the S.W. part of the Brulé Banks, the *Eastern Narrows of the North Traverse*, which is only 250 fathoms wide, and 4 fathoms can be carried through within this breadth. The Traverse Spit, and the *Horse Shoe Bank* to the N.W. of it, as well as the Brulé Banks, dry, for the most part, soon after half-ebb, and thereby greatly lessen the difficulty of the passage.

The mark for leading into the Traverse through the Eastern Narrows is, the S.W. point of Reaux Island and Point St. Vallier in one, bearing S.S.W. ¾ W. From the Eastern Narrows the channel runs S.W. by W. close along the southern edge of the Traverse Spit, leaving all other shoals to the southward.

At the distance of 2½ miles we come to the *Western Narrows*, which are also 250 fathoms wide and 4½ fathoms deep. The *Western Narrows* are between the Traverse Spit and the *West Sand*, which is 1¼ mile long and has 7 feet least water.

The mark for leading through the Western Narrows, after having arrived as far as the east end of the West Sand (which will be when Berthier Church is just shut in behind the S.W. point of Reaux Island, bearing S. ¼ W.,) is *Point St. John* and *Point Dauphine*, on the south side of Orleans Island, in one, bearing S.W. ¼ W.

Having cleared the Western Narrows, there is a fine clear passage between Orleans Island and the banks of Madame Island, not less than two-thirds of a mile wide, and with good anchorage all the way to the South Channel at Point St. John, a distance of nearly 7 miles.

The channel to the *northward* of the Island of Orleans has water enough for the largest ships, but is too narrow and intricate for general use.

The ISLAND of ORLEANS is distinguished for its fertility. The shores, in general, slant gradually to the beach; in some places are a few rocky cliffs, but not of great extent or elevation: from the foot of the slopes are large spaces of low meadow-land, sometimes intersected by patches of excellent arable. Bordering the north channel the beach is flat and muddy, with reefs of rocks running along it; but, on the southern side, it is a fine sand, with only a few pointed rocks sticking up here and there. The highest part of the island is by the church of St. Pierre, about 3½ miles from the western extremity, and almost fronting the magnificent Falls of Montmorenci; and also just above Patrick's Hole, on the south side, nearly abreast of St. Pierre, on which is placed the second telegraph of a chain between Quebec and the quarantine establishment at Grosse Island. The central part is thickly wooded. The churches of St. Lawrence and St. John are situated close down on the southern shore; the distance between them is nearly six miles, and this extent presents excellent cultivated lands, richly diversified with orchards and

gardens, and houses at short intervals from each other. *St. Patrick's Hole*, a little to the westward of St. Lawrence, is a safe and well-sheltered cove, where vessels outward bound usually come to an anchor, to await their final instructions for sailing. On the west point of it is a group of very neat houses; at several of which the inhabitants furnish accommodations to the numerous persons who visit the island, from amusement, or from curiosity, both in summer and winter.

Large quantities of grain, and most sorts of provisions, are continually sent from this island for the consumption of Quebec: among the fruits, apples and plums attain a much greater degree of perfection here, than in any other place of the lower district of Canada.

Off ST. PATRICK'S HOLE, above mentioned, ships ride in 10, 12, or 14 fathoms, abreast of the inlet. The telegraph, No. 2, is just to the eastward of this cove, on the high part of the island. The ground is not good, but it is well sheltered from easterly winds. Here the river is about one mile and a quarter wide, and bold on both sides.

At about half-way between St. Patrick's Hole and the west end of Orleans, is a shelf called MORANDAN'S ROCKS. They extend a cable's length from the island, and have only 10 feet over them.

On the S.W. part of the west end of Orleans is another reef: this is dry at low water, lies close in, and should not be approached nearer than in 10 fathoms. On the opposite shore, a little to the eastward of Point Levy, is another reef, which should be passed at the same depth. Northward of Point Levy is a small reef, but close in, and out of the fair-way.

BASIN OF QUEBEC.—The appearance of the lands forming the Basin of Quebec, is given hereafter, in the description of the river, from Montreal downward. We, therefore, only add here that it is one mile across between the high-water marks, with a great depth of water. The HARBOUR of QUEBEC, properly so called, commences at St. Patrick's Hole, and extends thence to Cape Rouge River, which is nearly three leagues above Quebec. The PORT of QUEBEC comprehends all the space between Barnaby Island and the first rapid above Montreal.

The situation of Quebec, the capital of Lower Canada, is unusually grand and majestic, in form of an amphitheatre. The city is seated on the N.W. side of the St. Lawrence, upon a promontory, formed by that river and the St. Charles. The extremity of this headland is called *Cape Diamond*, of which the highest point rises 345 feet above the level of the water. It is composed of a rock of grey granite, mixed with quartz crystals, (from which it obtains its name,) and a species of dark coloured slate. In many places it is quite perpendicular and bare; in others, where the acclivity is less abrupt, there are patches of brownish earth, or rather a decomposition of the softer parts of the stone, on which a few stunted pines and creeping shrubs are here and there seen; but the general aspect of it is rugged and barren.—(*Bouchette*, Vol. i., 241.)

Population in 1759, about 9000.—Now about 28,000.

The latitude of Quebec is 46° 48′ 9″, and its longitude we assume as 71° 13′, from the reasons assigned in the 'Memoir on the Atlantic Ocean.'

MONTREAL.—The communication between Quebec and Montreal, when not impeded by the ices, is chiefly by means of steam-vessels, which are, in general, gracefully moulded and finely finished. The cabins are fitted up with much elegance and taste; the tables are liberally provided with excellent fare; and the dessert displays the most delicious fruits of the country. Steamers start almost every day from both cities, and perform the voyage up the river in from 36 to 40 hours, but they are several hours less in accomplishing the trip downward, from the advantage of having a current setting in this direction as far as the Richelieu, where they meet with the tide.—(*Bouchette*, Vol. i., 270.) For the improved navigation recently established, see hereafter.

Population of the city and suburbs, in 1825, 22,357; now not less than 25,000.

The *rates of pilotage* for the river, and the *towing rates of steamers* between Quebec and Montreal, succeed the sailing directions in the following pages.

The laws of the Trinity House are particularly strict, with respect to shipping in the Port and Harbour of Quebec; and every attention must be paid to them, as well as to those respecting Quarantine. Of the latter, the pilots are bound to inform all masters, as soon as they board them below. A copy of the Harbour Laws is delivered to each master, on his arrival, by the harbour-master; and those respecting shipping may always be seen at the harbour-master's office.

TIDES IN THE RIVER ST. LAWRENCE.

On the days of full and change, the tide flows in the river as follows:—Near Cape de Monts, on the north side, at 1 h. 55 m. In Manicougan Bay, at 2 h.; here spring-tides rise 12, and neaps 8, feet. At Bersimis Point, 2 h.

On the south coast, near Cape Chatte, the time is 1¾ h. Here spring-tides rise from 12 to 14, and neaps 8, feet. Off the River Matane the time is 2 h. 0 m.; springs rise 12, and neaps 6, feet. At Grand Metis Bay, the time is 2 h. 10 m.; springs rise 13, and neaps 8, feet. Off shore hereabout, the current on the surface always runs downward, from 1½ to 2½ knots.

The time of high water at Green Island, is 3 h.; spring-tides rise 16, and neaps 10, feet. In the middle of the river, off the eastern part of this island, the flood from the north shore turns to the southward and sets thence eastward off the south shore; and thus below the Isle Bic, the stream sets constantly downward, at the rate of 1½ to 2½ knots as above mentioned.

At Green Island, the time is 2 h. 45 m.; at Kamourasca, 4 h.; at the Brandy Pots, 3 h.; in the Traverse, 4 h. 30 m. Off Point St. Roch or Roque, 4 h. 50 m. Here it ebbs 6¾ hours, and flows 5¼.

At the Isle Bic the stream never bends to the westward until an hour's flood by the shore. The neap-floods are here very weak; and, with westerly winds, none are perceptible. A spring-flood is, however, always found, within four miles of the shore, between Father Point and Bic.

The ebb-stream from the River Saguenay sets with great force south-eastward toward Red Island Bank. Off Green Island, on the opposite side, there is little or no flood, but a great ripple.

All the way hence to Quebec, the tide, when regular, flows tide and quarter-tide: but it is influenced greatly by the wind, and by no means to be depended on, as to its running, any where below Hare Island, where there is a regular stream of ebb and flood.

Between Barnaby and Bic the stream of flood sets in from the N.E. at the rate of about two knots; then fair through the channel until last quarter flood, when it sets to the N.W. by the west end of Bic, and then gradually to the N.E. as the flood slacks. The whole of the ebb, both to the eastward and westward of the island, sets strongly to the N.E.

The current between Bicquette and the north coast is generally very strong to the N.E., without any regular change. In the summer and autumn, as well as in spring-tides, this current slacks, and, near Bicquette, runs to the westward, during flood; but, until the upland waters have all run down, and the great rivers have discharged the freshes, caused by the thawing of the snows in the spring of the year, this current always runs downward.

From Bic to Green Island, on the southern side, the stream of flood is no where perceptible at a mile and a half from the islands. The ebb, or rather current, comes strongly from the N.W., out of the River Saguenay, and through the channel to the northward of Red Island, and joining the *eddy-flood*, before explained, increases the constantly downward course of the stream. Here it always runs in a S.E. direction, two miles an hour, with a westerly wind; but only so to the southward and eastward of Red Island. Between Red Island and Green Island, the ebb runs from 4 to 6½ knots. In crossing over to the north shore, this easterly current will be found to diminish; for, on the north side, the flood is pretty regular, and the ebb much weaker.

Eastward of the Razade Rocks, and near Bic, the eddy-flood assumes a N.E. direction, and sets strongly between Bic and Bicquette. To the southward of Bic, spring-floods run at the rate of a knot and a half; neaps are not perceptible. Ships that come to the southward of Bic, with a scant wind from the northward, must steer W. by N., to check the S.E. current, until they come into 18 fathoms of water, or up to Basque, whence they proceed for Green Island.

The first of the flood, spring-tides, sets from the N.E. along the north side of Green Island, and strongly toward the west end of it; then S.S.W. over the reef toward Cacona. In the middle of the channel no flood is perceptible. During spring-ebbs, the meeting of the N.E. and S.E. tides, near the middle of Green Island, causes very strong ripplings: and, to the eastward of Green Island, the S.E. ebb comes strongly about the east end of Red Island; here meeting, the N.E. tide causes a high rippling, much like broken water in strong easterly winds: but, in neap-tides, the floods are very weak, and in the spring

of the year there are none. This renders the part of the river now under notice more tedious in its navigation than any other, unless with a free wind.

From the west end of Green Island a regular stream of flood and ebb commences, which runs five hours upward and seven downward. At the Brandy Pots it flows tide and quarter-tide: and, above the Percée Rocks, on the south shore, it sets regularly up and down, N.E. by E. and S.W. by W.

From the Brandy Pots, the stream of flood sets toward Hare Island; and, near the west and N.W. with great strength, through the passage between the island and bank.

Above Hare Island, the flood sets regularly up the river. The ebbs contrarywise.

From the PILGRIMS up to Cape Diable, the flood is very weak, but it thence increases up to the buoys of the Traverse, where it runs at the rate of 6 knots. The first of the ebb sets toward the English Bank and Hare Island Shoal, when abreast of the greater island of Kamourasca, and the ebb contrary.

In *La Prairie Bay*, on the north side of the *Isle aux Coudres*, the time of high water is 4 h. 25 m., and here it flows six hours: the ebb-stream continues an hour and a quarter after low water, and the flood three-quarters of an hour after high water.

The tides in the North Channel being half an hour earlier than in the Southern Channels, the first of the flood sets strongly on the St. Roque and St. Anne's Banks; and the first of the ebb sets strongly across the shoals in the middle of the river. In the Traverse, spring-tides rise 18, and neaps 11, feet.

In the SOUTH TRAVERSE, on the full and change, the tide on-shore flows at half-past four, but it continues to run to the westward until six o'clock, when regular in the channel. With westerly winds there is a deviation, but it is certain that the tide on-shore rises three feet before the stream bends to the westward: and this allowance must always be made in every part of the river.

In the Traverse, the first of the flood sets from the N.N.E.; at the buoys, at a quarter flood, it takes a S.W. direction, and, when the shoals are covered at half-flood, at the Seal Reefs, it sets until high water S.W. by W. The ebbs, in a contrary direction, run with great strength; frequently, in the spring of the year, at the rate of 6 or 7 knots.

Between the Piliers or Pillars, it is high water at 5 h. 0 m. The ebb here runs 6 hours and 50 minutes; the flood, 5 hours and 25 minutes. Both streams continue to run an hour after high and low water by the shore.

From Crane Island the flood sets fair up the river, but the first of the ebb off L'Islet sets to the northward for half an hour, then fair down the river, and at the rate of not more than 3½ knots in spring-tide.

At the Isle aux Reaux, or Rat Isle, below Orleans Island, it is high water at 5 h. 32 m. It ebbs by the shore seven hours, and flows five and a half. The streams run an hour later. Off the S.W. end of Madame Island, it is high water at 5 h. 40 m.; springs rise 17, and neaps 13, feet.

At Quebec the time of high water is 6 h. 37 m. Here it ebbs by the shore seven hours and 40 minutes, and flows four hours and 45 minutes. Both streams run an hour after high and low water by the shore. Springs rise 18, and neaps 13, feet.

DIRECTIONS FOR SAILING UP THE RIVER, FROM ANTICOSTI TO QUEBEC.

"In working up the St. Lawrence, the south shore may be approached within a mile, if the land can be seen; but it must be remembered that the lead is of little use until you are past Matane River. On the north shore you have nothing to fear, while below Point de Monts, if the weather will allow you to see two or three miles off. After passing Point de Monts the intricate navigation of the river begins, and particular attention must be paid to the current, while making the board to the northward. In thick weather the lead will be the best guide between Matane and Barnaby on the south shore; but, on standing to the northward, we found the current setting strong to the north-westward, particularly in the vicinity of the Manicougan and Bersimis shoals; and in one instance, with an ebb tide, found a strong westerly set off Point de Monts." A similar instance occurred to H.M.S. Race-horse, in the night of the 6th of July, 1838. At 6 p. m.

Bimouski Church bore S.W. 6 or 7 miles: at 10, while in the act of tacking, she struck on a mud bank off the entrance of Bersimis River, having made a N.E. ¼ N. course by compass 24 miles, and ought to have been 10 miles E. by S. from the river and five miles from the nearest danger: the weather at the time very thick.

The fogs are generally low, and you may sometimes see the high land over them; at others they will clear off partially, for a few minutes, and come on again. In the latter case a bearing on Mount Camille and judging your distance off shore, will give you your position near enough to know how far you are up the river. When Mount Camille bears due south by compass, you are a little above Metis; and, if the weather is pretty clear, the high land about Cape Arignole, near Bic, will be seen. It makes like a bold headland, and can be seen at a considerable distance.

I make no doubt that the current down the St. Lawrence is much influenced by the heavy rains, from the number of rivers that empty themselves into it; and if the most particular attention be not given to the soundings, as well as the look-out that should be kept in thick weather, a ship will be set on the south coast before the land can possibly be seen. H.M.S. Race-horse, on the 7th of July, 1838, ascertained her position at 4 p. m. by bearing of the lighthouse on Point de Monts and chronometer sights, both agreeing, the weather clear and an E.S.E. wind blowing, which soon brought thick weather, and fell very light. At 11 h. 50 m. on the following morning the north shore was distinctly seen, and for 6 or 7 miles all round to the southward no land could be seen: it came on thick immediately, and a sight for latitude could not be obtained. The ship was on the larboard tack, lying S.E. and going at the rate of two knots; the water very smooth, but the surface appeared much agitated by a current, the set of which could not be ascertained. At 12 h. 30 m. the rocks were seen within a cable's length of the bows, and had more the appearance of a field of ice than of land; the helm was put down, and the ship fortunately came round in 2½ fathoms of water. Had there been a moderate wind, and the least swell, the ship would, in all probability, have been a wreck; the high land could not be seen. We had 2½ fathoms under the stern, and in two casts of the hand lead, going at the rate of two knots, had 17 fathoms, and at a cable and a half off shore no bottom at 50 fathoms. The weather suddenly cleared off, and we saw the high land apparently over the mast-heads. Sent a boat on shore, to ascertain our position, and found we were off Cape Chatte. The bottom was black sand mixed with the rock.

On the weather clearing up, the barometer sunk a tenth; by 4 p. m. it had sunk three-tenths, the weather very clear and a light air from the eastward: at 7 it gathered up to the northward, and we had a very heavy squall, which reduced the ship to close-reefed topsail and reefed courses; it lasted only about half an hour; the barometer immediately rose a tenth; the wind then became moderate, and gradually hauled to the southward, with rain.

We were always unable to make any allowance for the current, excepting the outset of the river; but as to the setting on and off the shores, at any particular time, no allowance could possibly be made. The safety of a ship much depends on the lead and a good look-out.

The lowest range of the barometer on this occasion was 29.50.*

Between the S.W. Point of Anticosti and the coast of the district of Gaspé, the current from the river sets continually down to the south-eastward. In the spring of the year it is strongest; this is supposed to be owing to the vast quantity of snow which thaws at that time. In the summer, when the smaller rivers have lost their freshes, this current is estimated at the general rate of two miles an hour; but in the spring, its rate has amounted to three and a half; which, of course, varies according to the quantity of snow, &c. Mr. Lambly says that there is a difference of two and three feet in the level of the River St. Lawrence, between the months of May and August; which he imputes to the quantity of ice and snow melted in the spring.

Those advancing toward the river, in the fairway between the S.W. point of Anticosti and Cape Rosier, with the wind from the North or N. by E., if ignorant of the current, may think that they are making a reach up, when really approaching the south shore. This is to be guarded against; particularly during a long night, or in dark and thick weather. It is always best to tack in time, and get out of the strength of the current which will be found to diminish toward the north coast.

* Communicated by Mr. Jeffery, M.R.N.

In coming up, with CONTRARY WINDS, and being far enough to the westward to weather Anticosti, stand to the northward, and keep within three or four leagues of the land up to the extremity of the Cape de Monts. Here the lighthouse, described on page 7, will be found extremely useful. The land is all bold, and the tide along it favourable. After getting up to Trinity Cove, or the coast to the N.E. of the cape, the flood will be found setting along the north shore.

Should circumstances render it necessary, you may proceed to, and take shelter at, the entrance of the HARBOUR of St. Nicolas, already described, which lies W. by N. 5 leagues from Cape de Monts.

Abreast of MANICOUGAN SHOALS, at about two-thirds of the channel over from the southward, a strong rippling has frequently been found; at about two miles farther north, another; and at two miles more a similar one: these are visible only in fine weather, and are supposed to be caused by the slack of the eastern current, which runs down on the south shore, and the regular flood on the north. In this part no bottom is to be found. Toward the *Points of Bersimis* and *Mille Vaches*, the same appearances may occasionally be found, but there is no danger; it being merely the conflict of the two streams.

In proceeding upward, with *contrary winds*, a ship should continue to keep over toward the north shore, but taking especial care to avoid the Manicougan and Bersimis shoals. Thus she will avoid the current setting strongly down the middle of the river, and have the assistance of the flood-tide, which is not felt hereabout on the south shore.

The current is sometimes strong to the N.E. between Bicquette and Mille Vaches.

If a ship has advanced up, on the north side, to Bersimis Point, with the wind at west, and a flood-tide, she may cross over to Father Point, and obtain a pilot. Should the wind change to S.W. by W., keep the north land on board, until sure of fetching the point.

With a FAIR WIND, and under favourable circumstances, a ship proceeding upward, on the SOUTH SIDE of the river, may find soundings, but very irregular, along the coast to Matane; the shore is, in general, steep. No anchoring in any part: the depth 20, 30, and 50, fathoms, at one mile from the rock, and all hard ground; in from 50 to 80 fathoms, the bottom is of clean sand.*

* In the year 1817, Mr. Wm. Bain, a master in the Royal Navy, published an interesting volume, entitled, "*An Essay on the Variation of the Compass; showing how far it is influenced by a change in the direction of the Ship's Head; with an exposition of the dangers arising to navigators from not allowing for this change of variation.*" In this work, Mr. Bain has noticed the frequent and remarkable aberration of the compass in ships, when approaching the vicinity of Cape Chatte. He says, "In the River St. Lawrence, the change in the variation should be most particularly attended to; as it leads a ship, both in going up and coming down, on the coast most to be avoided.

"On coming down that magnificent river, May, 1813, I found that it was necessary to steer a very different course from the opposite one made use of in going up, under very similar circumstances, a few days before. I noted the circumstance in my remark-book, sent to the Lords of the Admiralty, on returning to England; and, owing to that circumstance, and not having a copy nor log-book to refer to, I cannot state from memory the courses steered, though I remember the difference to have exceeded one point, and that we had an eight and nine knot breeze, both in going up and coming down, with the weather uncommonly fine, and every circumstance extremely favourable for making such remarks.

"Subsequent to the above period, one of our ships of war (the Zealous) had a very narrow escape in going up that river. The compasses in the binnacle were so much affected by local attractions, that, had the fog not cleared away at the moment it did, the ship must have run on shore, not far from Cape Chatte; she was in 19 fathoms.

"The gentleman from whom I had this information could assign no other cause why the compasses were so influenced, except from the muskets placed around the mizen-mast; but, on inquiry, I found that they had been there during the former part of the voyage; and, consequently, this could not have been the primary cause, as the deviation must have been sooner perceived. I am, therefore, inclined to attribute the near approximation of the land as being the primary, and the local attraction of the ship as the secondary, cause, acting on the magnetic needle with a compound force. All the compasses in the ship, when brought on deck, were alike affected.

"I have great reason to believe, that the non-attendance to the changes of variation in the River St. Lawrence, and perhaps in the vicinity, is one of the causes of the many losses that happen there.

"Before quitting this subject, I may, perhaps, be permitted to notice an effect produced by the change of variation, but hitherto ascribed to very different causes; and there is not an officer, I will venture to say, in the British navy, but will bear testimony to the truth of the following statement:—

"When beating to windward, and obliged to tack pretty often, say in chace of an enemy, or endeavouring to gain a port, all seamen have remarked that, every time the ship was put about, the wind *came round* some points with the ship; so that, for instance, if the wind was at South, and lying W.S.W. on one tack, the ship would lie only E. by S. or East on the other tack. At other

From Cape Chatte to Matane, the course and distance are W. ¼ S. 10½ leagues. When at 4 miles to the north-eastward of Matane, you will see the Paps bearing S.W. ¼ W.: they stand inland to the westward of the river, as already noticed, and this is the best bearing on which they can be seen. Mount Camille will now come in sight to the W.S.W., and may be seen in this direction 13 leagues off. It hence appears to the northward of all the la[illegible] on the south side, and in the form of a circular island.

Twenty-three miles W. ¼ S. of Matane River is Little Metis Cove, described on page 12. If requisite to anchor here, give the east end of the reef a berth of 100 yards, or cross it in three fathoms: then haul up into the middle of the cove, and let go.

Grand Metis, described on page 12, is 5½ miles W. ½ S. from Little Metis. The bank of soundings extends farther to the northward of these coves than off Matane, and 35 fathoms, with sand, may be found at four miles from shore; but, beyond this, the depths speedily increase to 60 and 70 fathoms. The edge of the bank continues steep as high up as Green Island. Along-shore, within 10 fathoms, the ground is hard, and it is difficult for a boat to land, unless in fine weather. From Grand Metis to Cock Cove, as already shown, page 13, the land trends W. by S. 10 miles. In fine weather, ships may stop tide between, in 15 fathoms.

Father Point, or Point aux Pères, has been already described, as well as Barnaby Island, which lies to the westward of it. (See page 13.) Small vessels, seeking shelter from westerly winds, may find a depth of 3 fathoms, under the reef extending from the east end of this island in *Rimouski Road*. Upon this reef is a large round stone, which serves as a mark. To enter, cross the tail of the reef in 4 fathoms, and then haul to the southward; and, when the island bears W. by N., with the large stone N.W. by W., anchor at a quarter of a mile from the island.

From Barnaby Island, the Isle Bic bears west, 10 miles; Bicquette W. by N. 11¼ miles; and Cape Orignal W.S.W. ¼ W. 3½ leagues. Cape Orignal and the east end of Bic lie North and South from each other, distant 2¾ miles. The Cape bears from Bic Old Harbour nearly West, about 2½ miles. From the cape a reef extends East one mile. The eastern part of this reef and the western point of the harbour, in a line, bear E.S.E. one mile.

Soundings, &c. between Cock Cove and Bic Island.—From Father Point, the bank extends northward five miles. At that distance from land are 35 fathoms of water, with sand and mud. Hence, westward, all the way to within one mile of Bicquette, the soundings are very regular. Ships may therefore stand to the southward by the lead, and tack at pleasure. They may, also, stop tide any where in this extent, in 9 or 10 fathoms, good ground.

If a ship arrives off Father Point, during an easterly wind and clear weather, when no pilots are to be obtained, she may safely proceed along the land in 10 fathoms of water.* On approaching the Isle Bic, the reef extending from the S.E. of that island will be seen: give this a berth, and continue onward through the middle of the channel between the island and Cape Orignal. With the body of the island N.E. you may come to an anchor, in 8 or 9 fathoms, clean ground, and wait for a pilot. There is a spot on the island cleared from trees: when this spot bears N.E., from a depth of 11 or 12 fathoms, you will be in a good berth. The ground is hard toward the island.

A ship off Father Point, during thick weather, and an easterly wind, without a pilot, may stand to the southward by the lead, and tack by sounding. In this case observe that, when in 10 fathoms, Bic will bear due west.

To beat up from Father Point to Bic Island, you may make free with the south shore;

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times, we have been well pleased, under similar circumstances, to find the wind favour the ship a point or two in every tack; so that, if the wind was at North, and the ship lying W.N.W. before tacking, she would lie N.E. by E., and N.E. upon the other tack. It is not a change in the wind which produces these apparent differences, but it is wholly to be ascribed to the local attraction in the ship. When the head is westerly, the north end of the needle is drawn half this difference westward; when the head is easterly, it is drawn half the difference eastward."—(*Page* 89.)

Mr. W. Forbes, in H.M.S. Vestal, June, 1838, experienced the same phenomenon; the deviation of the compass being from 1½ to 1¾ points *increase* upon the amount of westerly variation allowed. —See *Nautical Magazine*, June, 1843, p. 428.

* The pilots repair to their rendezvous in April. On their boats and sails are their respective numbers. The proper rendezvous is at Father Point; but they are often met with at Matane and Cape Chatte, and sometimes lower down.

as, by nearing it, the flood-tide will be most in your favour. The depth of 7 fathoms is a good fair-way, and you may anchor in that depth all the way up to the island. When beating in, to the southward of Bic, from the eastward, stand to the southward into 7 fathoms while to the eastward of the island, but approach no nearer to the S.E. reef than 9 fathoms. In the middle are 12 fathoms. In standing to the northward, toward Bic, tack in 10 fathoms all along the island, and when it bears N.E. anchor as above.*

THE GENERAL COURSES, ETC. BETWEEN CAPE CHATTE AND ISLE BIC, ARE AS FOLLOW:

A ship bound upward, and having arrived within three leagues to the N.E. of Cape Chatte, should steer W. by S. or according to the wind, allowing for current to S.E., as already shown. Running thus, for 24 leagues, will bring you to Father Point. Should the weather be thick, you may haul to the southward; and if, after gaining soundings in from 30 to 25 fathoms, the water should suddenly shoalen to 20 and 15, you will not be up to the point, but may safely run four or five miles higher: with soundings, and the water gradually shoaling from 30 to 25, 18, &c. in three or four miles, you will be up with the point, and may make signal for a pilot, approaching no nearer than in 12 fathoms. Here you will be about one mile and a half from shore; and will, if the weather be clear, see the houses. The shore is bold-to, and may be approached with safety. From Father Point to the Isle Bic, the bearing and distance are W. ¼ S. 16 miles.

While advancing from the eastward toward Father Point, and being off Little Metis, the high land to the southward of Cape Arignole, or Orignal, may be seen before the cape itself or Isle Bic come in sight. From off Mount Camille, in clear weather, Bic may be clearly seen. To avoid mistaking Barnaby Isle for that of Bic, observe that, in thick weather, a ship cannot approach the land, near Father Point, without gradually shoaling the water; consequently if, while keeping the lead going, you come into 9 fathoms, and make an island suddenly, it must be Barnaby; or, if falling in with an island on any bearing to the westward of W.S.W., one cast of the lead will be sufficient to ascertain which it is; for, with Barnaby from W.S.W. to west, you will have from 7 to 5 fathoms only; but with Bic on the same bearings are from 15 to 12 fathoms.

If, with the lead kept going, and no soundings be found, you suddenly fall in with an island to the southward, it must be Bicquette, which is now better distinguished by the light-tower erected in 1844, as described on page 13. With this island S.W. half a mile, there are 16 fathoms of water. At two miles east from it are 10 fathoms, and a ship advancing into this depth, from the deeper water, may either haul off to the northward, and wait for clear weather, or proceed, by sounding around the reef from the east end of Bic; steer thence west two miles, and come to an anchor, within the island, in 12 or 11 fathoms. At 4 miles north of Bicquette are 50 fathoms of water.

With an EASTERLY wind, if requisite to anchor on the south side of Bic, to proceed from windward, run boldly to the southward, and look out for the reef extending from the east end of the island; the latter may be seen, being always above water. Give the reef a berth of a quarter of a mile, and run along, in mid-channel, until Cape Orignal bears S.S.E., the body of the island then bearing N.N.W. In 10 or 11 fathoms is a large ship's berth, the ground clear and good. Small vessels may run up, until the island bears N.E. in 9 fathoms, at about a quarter of a mile from the island; but here the ground is not so clear as in the deeper water. Fresh water is obtainable in the cove just to the westward of the east end of the island.

If, during a WESTERLY wind, a ship should be to the windward of the island, and it be required to bear up, in order to anchor, stand to the southward, into 11 fathoms; then run down and anchor, as above directed; but particularly noticing that, with little wind, 10 fathoms is the proper depth of the fair-way, and that the last quarter-flood, and all the ebb, sets strongly between Bicquette and Bic.

* A family (that of *Madame Petit*) is settled at S.S.W. from Bic, in a small cove at the bottom of a hill 1236 feet in height. Here, and on Bic Island, water may be had. The next parish, westward, is Trois Pistoles, and at this place provisions may be obtained. Between these places are no houses or settlements, but from the latter to Quebec are regular stages. Passengers wishing to quit the ship at Bic, in order to proceed by land, by going to Madame Petit's house, may find a guide to take them through the wood to Trois Pistoles, or may take a boat up to the latter. (1818.)

Should you, with the wind *easterly*, be too far to the westward to fetch round the east end of Bic, in order to gain the anchorage, give Bicquette a berth of half a mile, then run up until the west end of Bic bears S.E., when Cape Orignal will be open of it. The latter mark leads to the westward of a reef that covers at a quarter tide, and extends W.S.W. one mile from Bicquette. Another reef, always in sight, lies between the former and Bicquette. By hauling round to the southward, with Cape Orignal open, you will pass athwart the opening between Bic and Bicquette, in from 16 to 12, 10, and 9 fathoms; the water thence shoalens into 6 fathoms, on the spit of mud and sand lying S.W. by W. from Bic, one mile. After crossing this spit, you will deepen into 9 and 10 fathoms, when the passage will be open, and you may come to an anchor.

The N.W. ledge of Bic, the west end of that isle, and Cape Orignal, are nearly in a line when bearing S.½E. When beating into Bic, from the westward, while standing to the southward, do not shut Mount Camille with Cape Orignal; in standing to the northward, do not shut Mount Camille with the Isle Bic.

BANK OF SOUNDINGS.—In the offing, between Barnaby and Bic, are regular soundings, decreasing from 35 to 30 fathoms, generally of clean ground. Ships may, therefore, anchor in any depth, but no nearer than a mile and a half, with Bic bearing from W.S.W. to S.W., as otherwise, the channel on the south of that island will not be open; and, with a sudden shift of wind, you may not be able to quit the island.

At N.W. from the eastern extremity of the S.E. reef of Bic, and just to the southward of the stream of Bicquette, is the *N.E. reef*, a dangerous ledge, seen at low-water, spring-tides only. To avoid it, give Bic the berth of a mile. Westward of Bic the edge of the Bank of Soundings trends to the S.W.-ward up to Basque Isle, and ships may therefore stand safely to the southward by the lead, 12 fathoms being the fair-way.

ISLE BIC TO GREEN ISLAND.—From the Isle Bic, Green Island bears S.W. by W. ½ W. 9½ leagues: and the course will therefore be from W.S.W. to S.W. according to the distance northward from Bic, &c. In this course and distance, you pass the Alcides Rock, the Razades, Basque, and Apple Island, which have been described in page 14. From the rocks of Apple Island to the eastern reef of Green Island, the bearing and distance are W. by S. 2 miles. This reef extends nearly a mile from the trees on the east end of Green Island, and is always uncovered. The small channel on the south side of Green Island is nearly dry at low water.

The edge of the bank is steep to the northward of the Razades, &c.; but from 35 fathoms, inward, there are gradual soundings. Between Bic and Green Island there is anchorage all the way in 14 fathoms; and for small vessels, in fine weather, in 9 fathoms. If up to the east end of Green Island, and the tide be done, you may anchor in 10 fathoms, off the reef, and in the stream of the ledge extending N.E. by N. from the lighthouse point, at the distance of a mile from the extremity of that shoal.

Between Bic and Basque the ground is all clean; but thence to Green Island it is foul. A small vessel may find shelter under the east end of Basque, in 2½ fathoms at low water, giving the east end of the reef extending from that island the berth of a quarter of a mile. The anchorage is with the island bearing W. by S.

The LIGHTHOUSE and reefs about Green Island have been already described in page 15. The lighthouse bearing S.W. by W. leads safely up to Green Island. The high land to the southward of Cape Orignal kept open to the northward of Basque Island, leads clear of the lighthouse ledge. With the lighthouse bearing S.W. by S., this ledge will be exactly between the ship and lighthouse.

Between the lighthouse and the west end of Green Island, in fine weather, you may stop tide in 20 or 25 fathoms, close to the north side of the island: but, if the wind be fresh, the ground will be found to be bad for holding, and too near the shore. During N.E. winds, small vessels may anchor between the S.W. reef and Cacona, in 4 fathoms; but it will be better to bear up for the Brandy Pots, lest they be caught by adverse weather, &c.

RED ISLAND bears from the lighthouse of Green Island N.W. by W. ½ W. nearly 5½ miles. The eastern extremity of its extensive reef bears from the lighthouse nearly N.W. by N., and is cleared by the lighthouse and beacon on Green Island in one, bearing S.S.E. ¼ E. When coming up in the night, the light should not, therefore, be brought to the eastward of S. by E., until you are certainly within five miles of it. If, with the light bearing S. by E. you cannot make free to enter the Narrows, wait for daylight; and, should the wind be scant from N.W., you may then borrow on the south side of Red Island, but

so as to have White Island open twice its own breadth from the north side of Hare Island. On drawing to the westward, you may approach the shoal of White Island by the lead, remembering that the ebb-tide sets strongly down between White Island Shoal and Red Island, and the flood in the contrary direction. A vessel may anchor, in fine weather, on the south side of Red Island Reef, in 12 fathoms, at the distance of about three-quarters of a mile. The tide hereabout, as already shown, sets in all directions.

The SOUNDINGS between Green Island and Red Island are very irregular. At a mile from each are nearly 30 fathoms of water. The water of this channel, during ebb-tide, with an easterly wind, appears broken, but there is no danger.

The NORTH COAST.—The *Point de Mille Vaches* bears from Bicquette N. by W. 4½ leagues. The extensive shoal, which surrounds this point, commences off the river of *Port Neuf*, on the east. The southern extremity of the shoal is a mile from shore, and is very steep-to. The greater part of the shoal is dry at low water. Above the point the land forms the *Bay of Mille Vaches*, which is shoal, and full of rocks. At 11 miles S.W. by W. from Point Mille Vaches, are two islets, called the *Esquemin Isles*. In the Bay, at 4 miles west from the point, is a small river, called *Sault au Mouton*, having a handsome fall of 80 feet, near the mouth of it, which may be always seen when passing. Between the Esquemin Isles and Saguenay River, a distance of 7½ leagues, S.W. by W., are three small rocky islets, named *Bondesir* and *Les Bergeronnes*, which afford shelter to fishing-boats.

In proceeding for the Saguenay River, should the weather be thick, it would be advisable to drop anchor at the Brandy Pots, until the weather becomes favourable, when the entrance can be easily effected with a leading wind. The leading marks are good, and the entrance a mile wide between the shoals. The Bull is a round mountain on the north side of the Saguenay, about 3 miles up, and by keeping the Bull open from the points, there is no danger in running in; and when abreast of the port or houses at Tadousac, they may run up on whatever side they think they have most advantage, but with ebb-tide there is less current on the north-east side of the river.

Other directions have been given in the description of the river on p. 11, and it may be added here that there are good anchorages at the Anse St. Etienne, 10 miles above Tadousac, at St. Louis Island, 15 miles from Tadousac, at the Anse St. Jean, 22 miles, and at the Baie de l'Eternité, 28 miles above Tadousac, at all of which vessels might lie well to load; in other parts of the river the depth is far too great to anchor.

Ships working up on the north side, between the Esquemin Isles and Red Island, should keep within two leagues of the north land: the shore is clear and bold, and the flood pretty regular.

Should a ship, to the northward of Red Island, be caught by a sudden shift of easterly wind, so that she cannot fetch round the east end of Red Island Reef, she may safely bear up and run to the westward, giving Red Island, White Island, and Hare Island, on the larboard side, a berth of two miles in passing. At three leagues above Hare Island, haul to the southward, and enter the South Channel toward Kamourasca; whence proceed as hereafter directed.

GREEN ISLAND TO THE BRANDY POTS.—The Percée Rocks, Barrett Ledge, White Island, and the Brandy Pots, have already been described. (See page 15.) From Green Island to the Brandy Pots, the course and distance are from S.W. ½ W. to S.W. by W. 4 leagues. To sail to the northward of Barrett Ledge, bring the southernmost mountain of Kamourasca in a line with the saddle of the Great Pilgrim, or an islet lying off the N.E. side of Green Island, touching the high land of Cape Arignole. Either of these marks will clear the Ledge.

In advancing toward the White Island Reef, you may trust to the lead: seven fathoms is near enough to tack or anchor in, and this depth is in the fair-way to the Brandy Pots. The Brandy Pots are steep on the south side, 10 fathoms being near to them.

There is good anchorage to the eastward of the Brandy Pots, in from 9 to 7 fathoms, and good anchorage above them, in from 9 to 14 fathoms. This is the best roadstead of any part of the river, during easterly winds, excepting that of Crane Island, and is the usual rendezvous for vessels bound down the St. Lawrence, and waiting for a wind.

There is a good passage to the southward of Barrett Ledge up to the Pilgrims, leaving the *Middle Shoal*, which is above Barrett Ledge, on the starboard hand. The north passage is, however, the best, and most used.

BRANDY POTS TO THE SOUTH TRAVERSE AND GOOSE ISLAND.—For the flat on the south side of Hare Island, above the Brandy Pots, see page 16. This flat is bold-to, there being 7 fathoms close to it, nearly up to the west end; and the whole of this side of the island is bound by rocks.

The lower end of the Middle Bank, as already noticed, (page 16,) bears S.E. ¼ E. about a mile and a half from the Brandy Pots. Between the Middle Ground and Hare Island are 10 and 16 to 20 fathoms of water. On the south side of the Middle Ground, there are 8 and 9 fathoms; at half tide, in this part of the river, a large ship may safely beat up or down.

In proceeding to the westward from the Brandy Pots, there is a 3-fathom rocky patch, and the knoll, at the west end of Hare Island Bank, to be avoided, the rocky patch being two-thirds of a mile eastward of the knoll, which is to the S.E. of the western end of Hare Island; between them there are 3½ and 4 fathoms. The marks and bearings of these have been described, (page 16.) The Middle Bank, which extends between the Middle Shoal and Hare Island Bank, has 3½ and 4 fathoms on it, and consequently this draught may be carried over it, but if a greater depth than 3 or 3½ fathoms is wanted, White Island must be brought open to the eastward of the Brandy Pots. When White Island is brought to the westward of the Brandy Pots, or midway between them and Hare Island, the mark is directly on the 3-fathom patch, before described.

In standing to the southward from Hare Island, above the Brandy Pots, you will find 18 and 20 fathoms of water. On the north side of the Middle Bank, 4 fathoms; but there are 8 and 9 fathoms on the south side of this bank, with gradual soundings to the south shore. Five fathoms is a good depth to tack in. Abreast of the middle of Hare Island the depths are nearly the same.

The direct course from the Pilgrims to the Chequered Buoy on the south side of the Traverse is S.W. by W., the distance about 7½ leagues. The South Traverse and coast between have been fully described. (See page 18.) The bank between the Pilgrims and Kamourasca Isles is steep-to. The mark for tacking here is not to shut the S.W. land with the great Island of Kamourasca—in standing to the northward, you will gain the depth of 20 fathoms.

KAMOURASCA.—From the west end of Crow Island, the third of the Kamourasca Isles, as described on page 17, the church bears S.E. nearly a mile. Between is a place on which ships may safely be run on shore. To get in, bring the church to bear E.S.E., or some distance to the westward of Crow Island, and run for it. In passing in, you will carry 14 feet in common spring-tides, and 10 feet with neaps. The bottom is of soft mud.

CAPE DIABLE bears from Crow Island S.W. ¼ W. about three miles, and a reef extends from the cape as already explained, the easternmost part of which is not more than a mile and a half from Crow Island. Ships from the westward, therefore, in order to get in, should run down along the reef in 6 fathoms, and haul in for the church, as above.

With easterly winds, the large cove on the S.E. of Cape Diable is a fine place for a vessel to run into, should she have lost her anchors. To enter, bring the church and Crow Island in the line of direction given above. Having arrived within the reefs, run up to the westward, leaving an islet that lies above the church on the left side; then put the ship on shore in the S.W. part of the cove, and she will be safe. Should the wind be westerly, put her on shore a little to the eastward of the church.

SOUTH TRAVERSE.—From Cape Diable to the SOUTH TRAVERSE, the course, if at three miles from the cape, will be S.W. by W. In proceeding, keep the northernmost part of the high land of Kamourasca in a line with the low point of St. Denis: this mark will lead to the Light-vessel and the black buoy off the point of St. Roque, and the white buoy upon the Middle Ground on the opposite side. When St. Roque church bears S.E. by S., the roadway beyond the church will be in a line with it, and you will be up to the buoys. From this spot run one half or quarter of a mile above the buoys on a S.W. course.

From the spot last mentioned, the direct course upward along the edge of St. Roque's Bank will be S.W. ½ S. 4 miles, and S.W. by S. 2 miles; but considerable allowance must be made for tide, whether ebb or flood. These courses lead up to abreast of the red buoy, lying on the bank at 4½ miles W.S.W. ½ W. from the Point of St. Roque. The depths on the courses prescribed are 8, 7, and 6, fathoms, varying to 11, and again to 5½ and 6 fathoms.

On proceeding hence upward, with the lighthouse on the Stone Pillar in sight, bearing

S.W., you will keep in the best water, but south-westward of the red buoy are several detached 2½ and 3-fathom shoals, one of which, the Channel Patch, is in the fair-way: the bearings and marks are described on page 18. It may be passed to the northward or southward, until you have the Stone Pillar at the distance of two miles, where the depths at low water are 5 and 6 fathoms: from this place you bear up, on a south course, into the southern part of the Traverse; and thence, not forgetting the *Avignon* or *South Rock*, the course will be S.W. ½ W. until past the Stone Pillar and Goose Island Reef, which you keep on board upon the starboard side.

If running from off Cape Diable for the Traverse, during the night or in a fog, strike the bank off that cape in 7 or 8 fathoms, and steer about W.S.W. By keeping the water, it will lead to the light-vessel. On passing the point of St. Roque Sand, the water will suddenly be found to deepen, whence you must haul to the southward, keeping the south side on board, and proceeding as above.

If entering the Traverse with *little wind*, be careful to allow for the first of the flood, as it sets strongly toward the point of St. Roque Bank. On going through, if more than half-flood, allow for a set to S.W. by W., and be sure always to keep the south bank on board. Above the Piliers, or Pillars, the tide sets fair up the river.

In beating into and through this passage, be careful and tack from each side on the first shoal-cast of the lead: but most so to the northward, on the edge of the Middle Ground. Ten fathoms is near enough to the bank: and it is to be remembered, that the ship will always go farther over toward the Middle Bank than to the point of St. Roque Shoal.

ANCHORAGE.—Between the Brandy Pots and Traverse, there is anchorage all along the English Bank, and upon the edge of the flat on the south side, between the Pilgrims and the greater Kamourasca Isle, in 9 fathoms: under the Pilgrims in 3 fathoms; off Cape Diable, in 10 fathoms; and thence, along the flat, up to the buoys.

Should the flood be done, when a ship is in the Narrows, or between the buoys, or if any occurrence render it necessary to anchor thereabout, instead of coming-to in the channel, run below either buoy, and come-to there, in 7 fathoms, on either side. The tides will be found much easier after half-ebb below the buoys than between them. In the deep water the tides here run very strong. Should the wind be inclinable to the southward, anchor to the southward of the stream of the black buoy, in 7 fathoms. Should a ship be a mile above the buoys, under similar circumstances, she should anchor on the edge of the South Bank, in 7 fathoms, with a good scope of cable before the tide comes strong; for, if the anchor once starts, you may have to cut from it, as it seldom takes hold again, the grounds hereabout being foul and unfit for holding.

Near the Pillars the tides are much easier than below; at and above them, setting at the rate of not more than 3½ miles an hour.

Ships bound down, with easterly winds, may anchor at two miles to the north-eastward of the South Pillar, in 7 fathoms; or, to the southward of it, in the same depth, with good ground.

STONE PILLAR, or PILIER DE PIERRE, to CRANE ISLAND.—From abreast of the Stone Pillar, or of the Avignon Rock, the direct course and distance to Crane Island, are S.W. ½ W. 4 leagues. On this course you pass Goose Island, and arrive at the Beaujeu Bank, the channel to the south of which is that generally used; the depth in it is irregular, varying from 5 to 3 fathoms; and there are two rocky patches of 2½ fathoms in the way, and difficult to avoid. The marks for passing the southern edge of the Beaujeu Bank, along the eastern half of its length, are, the Stone Pillar, its own breadth open to the southward of Goose Island Reef; and for the western part of the bank, which turns up slightly to the northward towards Crane Island, Point St. Vallier in one with the south side of Crane Island.

The south side of the channel is a muddy flat, of 3 and 2 fathoms, with regular soundings toward it. There is good anchorage all the way up to Crane Island. Stand no nearer toward Goose Island Reef than 10 fathoms; but above it you may stand toward the island to 7 fathoms. (See page 19.)

When up to the body of Crane Island, you may approach safely, as it is bold and clear, with 7 fathoms close to the rocks.

ANCHORAGE.—From off the Pillars to Crane Island, there is all the way good and clean ground. There is, also, a good road off the body of Crane Island, in 8 fathoms. The best road in the river, during easterly winds, is at a mile to the westward of Crane Island: and

ships bound downward, if at the Pillars, and caught by strong easterly winds, had better run back to this place, than ride below, and risk the loss of anchors.

CRANE ISLAND TO POINT ST. VALLIER.—The direct course and distance from Crane Island to Point St. Vallier, are from W. by S. to W.S.W. four leagues. Between are the mud bank of St. Thomas, the Wye Rocks, the Belle-Chasse Islets, and the bank of Grosse Island. *For description, see page* 19.

The Bank of St. Thomas is above two miles broad, and is dry at low water, nearly to its northern edge, which is very steep, and the marks for clearing it are Belle-Chasse Island and Point St. Vallier touching.

When St. Thomas's Church bears S.E. ½ E. you will be abreast the point of the bank called Margaret's Tail, having a red buoy, and may thence steer directly up, W.S.W. The mark for the southern edge of Margaret's Tail Bank is, the S. side of Haystack Island and Crane Island Church in one, bearing E.N.E.

To avoid the Wye Rocks, never stand to the southward of six fathoms in the night: and by day, observe that the long mark is to keep Belle-Chasse Islets just open to the southward of Point St. Vallier. They are out of the way of vessels, with a fair wind, and the cross mark for them is the Seminaire on the north shore in one with the E. point of Reaux Island, and Crow Island just open to the westward of Middle Island.

To the west of Margaret's Tail is a narrow rocky shoal called Grosse Patch, with 7 feet least water; between this shoal and Margaret's Tail is a channel 270 fathoms wide, and 5 fathoms deep, leading to the Quarantine Establishment on the southern side of Grosse Island. For the guidance of the numerous vessels which stop there, a red buoy has been placed on the S.W. end of Margaret's Tail, as before mentioned, and also a white buoy on the N.E. of Grosse Patch; but in the absence of buoys, the east points of Grosse Island and the Brothers in one, bearing N. by E., will lead through. There is a passage to the west of Grosse Patch, between it and the island, but care must be taken to avoid a small rock, with 7 feet least water, lying 180 fathoms off Grosse Island, and on which a black buoy has been placed.

When above Margaret Island, stand no farther to the northward than into 6 fathoms. Reaux or Rat Island and Madame are flat to the southward; 7 fathoms will be near enough to both. The south side of the channel, up to Belle-Chasse, is all bold; 8 fathoms are close to it, with 7, 8, 9, and 5, fathoms, quite across. There is good clean anchoring-ground, and easy tides, all the way.

When up to Belle-Chasse, stand no nearer to these islets than 8 fathoms, and to Madame than 6 fathoms. The shoal extending from Madame has already been noticed, p. 19.

The mark for clearing the southern side of Madame Bank, as well as the Grosse Island Tail and Patch, is, Race Island kept just open to the southward of Margaret Island. The mark for the S.W. extreme, which is the point of the entrance of the North Traverse, is, the north side of Reaux Island just open to the northward of Madame Island, bearing N.E. ¾ E., and St. Vallier Church bearing S. ¼ E. The cross mark for clearing it to the S.W. is, Berthier Church and the west end of Belle-Chasse Island in one.

The NORTH CHANNEL and TRAVERSE and the MIDDLE TRAVERSE are but seldom used, and the description of them will be found on p. 20.

ST. VALLIER to QUEBEC.—From the Point of St. Vallier to that of St. Laurent, or St. Lawrence, in Orleans, the course and distance are from W.S.W. to S.W. by W. 9½ miles. Both sides are bold; 10 fathoms in the fair-way from Orleans, and 8 fathoms from the south shore. Ships may anchor toward the island, in from 16 to 10 fathoms.

The SHOAL of BEAUMONT, *described in page* 20, is steep-to. Make short boards until you are above Point St. Lawrence, when you will be above it, and may safely stand to the southward into 10 fathoms.

From POINT ST. LAWRENCE to POINT LEVY, the course and distance are W. by N. two leagues. At a mile and a half westward from St. Lawrence's church is St. Patrick's Hole. (*See page* 22.) Here in about 10 fathoms, is the fair-way to tack from. The depth in the middle is 10 fathoms.

From off POINT LEVY to QUEBEC, the course is W.S.W., and the distance about two miles. The shoals of Beauport, on the north side, may be easily avoided: in standing toward them, advance no nearer than in 10 fathoms, as they are steep-to, and are, in some parts, studded with rocks.

Ships arriving at Quebec, with flood-tide and an easterly wind, should take in their

canvas in time, and have cable ready, as the ground in the basin is not very good for holding, the water being deep, and the tides strong, particularly spring-tides.

If obliged to come-to in the middle, there will be found from 16 to 20 fathoms abreast of the town; but near the wharfs, or at 2 cables' length from them, is a depth of 11 fathoms; and here vessels are easily brought up: but, in the offing, 16 fathoms of cable will be required. On the Point Levy side is a depth of nearly 30 fathoms, and the tides are stronger here than near the wharfs. With the wind heavy from the eastward, the best riding will be above the wharfs, off the cove called Diamond Harbour, in the depth of 10 fathoms.

The BALLAST GROUND, or place appointed by law for heaving out the ballast in, is to the westward of two beacons fixed on the south shore, above Quebec. These beacons stand on the brow of a hill, above a cove called Charles Cove, and when in a line bear S.E.

GENERAL DESCRIPTION OF THE RIVER ST. LAWRENCE, DOWNWARD FROM MONTREAL TO QUEBEC, ETC.

CANADA extends in the same parallels of latitude as the kingdom of France; but, instead of exhaling the exquisite fragrance of flowers, and ripening delicate fruits into delicious excellence, as is the case in that country, its surface is covered with accumulated snow for nearly one-half of the year, and vegetation is suspended for the same period by continued frost. Notwithstanding this severity, the climate of Canada is congenial to health in an eminent degree, and highly conduces to fertilize its soil. Heat and cold are certainly felt to extremes, and the latter, both in duration and intensity, is by far the most predominant.*

From the beginning of December until the middle of April, the water communication of the River of St. Lawrence is totally suspended by the frost. During this period the river, upward, from Quebec to Kingston, (in Upper Canada,) and between the great lakes, excepting the Niagara and the rapids, is wholly frozen over; the lakes themselves are never entirely covered with ice, but it usually shuts up all the bays and inlets, and extends many miles toward their centres. Below Quebec the river is not frozen over, but the force of the tides incessantly detaches the ice from the shores, and such immense masses are kept in continual agitation by the flux and reflux, that navigation is totally impracticable in these months. By the beginning of May the ice is either dissolved or carried off by the current.

The ISLAND of MONTREAL is considered as the most beautiful part of Lower Canada. On the S.E. side of it is the City, with its convenient port, at 90 sea-leagues from the Isle Bic, and to this place ships of 600 tons may ascend, with very little difficulty. From Montreal, downward, the navigation assumes a character of more consequence than what it does above, being carried on in ships and decked vessels of all classes. In the distance hence to Quebec, 45 leagues or 135 miles, the impediments to the navigation of large vessels, up or down, are not many, and they may be readily overcome, if expedient for cargoes to be so conveyed, in preference to small craft. On either side of the river the prospects are admirable, the land being in the highest state of improvement that the agriculture of the country will admit of, although the component parts do not possess that degree of grandeur which is exhibited below Quebec. Numerous villages are seen, for the most part, built around a handsome stone church; while single houses and farms, at agreeable distances, appear to keep up a regular chain of communication. At about 39 miles below Montreal, on the south bank of the river, is the town of WILLIAM HENRY, formerly SOREL, which stands at the entrance of the River Richelieu, and above the lake of St. Pierre, or St. Peter. The latter is 22 miles long and 8 broad; but a portion of about 8 miles of the western part is filled with a group of islands, which, however, form two channels; and of these, the one on the south, being the deepest and clearest, is the best for ships; the entrance to it is indicated by a light-vessel and a buoy. Here the banks on each side are very low, with shoals stretching from them to a considerable distance, so that a narrow passage only, with 18 to 12 feet of water, is left clear.

On the north side of the river, at about 33 miles below William Henry, is the town of TROIS RIVIÈRES, or THREE RIVERS, the third in rank within the province of Lower Canada. It stands at the mouth of the River St. Maurice, and here the tide entirely ceases. Between Trois Rivières and Richelieu Rapid, about 33 miles, there is little variation in the general

* Bouchette's Description of Canada, 1815.

aspect of the country. At the Richelieu Rapid the bed of the river is so much contracted and obstructed, by huge masses of rock, as to leave but a very narrow channel; and in this, at ebb-tide, is so great a descent, that much caution and a proper time of tide are necessary for passing through: at the end of the rapid is good anchorage, where vessels can wait for a convenient opportunity.

From Montreal, thus far, the banks are of a very moderate elevation and uniformly level; but hereabout they are much higher, and gradually increase in their approach to QUEBEC, until they attain the height of Cape Diamond, upon which the city is built.

RATES OF PILOTAGE FOR THE RIVER ST. LAWRENCE.

From BIC *to* QUEBEC. *Per Foot.*	£.	s.	d.
From the 2d to the 30th of April, inclusive	1	0	6
1st of May to the 10th of November, inclusive	0	18	0
11th to the 19th of November, inclusive	1	3	0
20th November to the 1st of March, inclusive	1	8	0
From Quebec to Bic.			
From the 2d to the 30th of April, inclusive	0	18	3
1st of May to the 10th of November, inclusive	0	15	9
11th to the 19th of November, inclusive	1	0	9
20th of November to the 1st of March, inclusive	1	5	9

Rates of pilot-water and poundage on pilot-money are payable at the Naval Office, by masters and commanders of vessels.

For every foot of water for which masters and commanders of vessels are bound to pay their pilots from Bic to Quebec, and from Quebec to Bic, 2*s.* 6*d.* currency, per foot.

For Vessels going to Three Rivers or Montreal,

Of 100 to 150 tons, inclusive, 2*l.* currency.
Of 151 to 200 tons, inclusive, 3*l.*
Of 201 to 250 tons, inclusive, 4*l.*
Of 250 tons, and upwards, 5*l.*

On settling with pilots, masters or commanders of vessels, or the consignees of such vessels, are to deduct 1*s.* in the pound for the amount of the sums to be paid for pilotage, which will be exacted by the Naval Officer at clearing out, the same being funded by law, under the direction of the Trinity House, for the relief of decayed pilots, their widows and children.

REGULATIONS *for the pilotage above* BIC *to* QUEBEC.

At or above the anchorage of the Brandy-Pots;—
two-thirds of the present rate for a full pilotage.
At or above the Point of St. Roque;—
one-third of ditto.
For above the Point au Pins, on the Isle aux Grues (Crane Island), and below Patrick's Hole;— one fourth of ditto.

And at and above Patrick's Hole, 1*l.* 3*s.* 4*d.*

For shifting a vessel from one wharf to another, between Bréhant's wharf and Point à Carcis, or to the stream from or to any of the above wharfs, 11*s.* 8*d.*

For shifting a vessel from the stream or from either of the above wharfs, to St. Patrick's Hole, or to the Basin of Montmorency, or to the Ballast Ground, the Basin of the Chaudière, the Wolfe's Cove, and as far as the River Cap Rouge, 1*l.* 3*s.* 4*d.*

RATES *above the* HARBOUR *of* QUEBEC:

From Quebec to Port Neuf.		*To Quebec from Port Neuf.*
	For vessels of registered measurement, not exceeding 200 tons	2*l.* 10*s.* currency.
4*l.* currency.		
5*l.* ,,	If above 200 and not exceeding 250 tons	3*l.* 10*s.*
6*l.* ,,	If above 250 tons	4*l.*

To Three Rivers, or above Port Neuf.		From Three Rivers, and above Port Neuf.
6*l.* currency.	For vessels not exceeding 200 tons	4*l.* currency.
7*l.* ,,	If above 200, and not exceeding 250 tons	4*l.* 10*s.*
8*l.* ,,	If above 250 tons	5*l.* 10*s.*

To Montreal and above Three Rivers.		From Montreal and above Three Rivers.
11*l.* currency.	For vessels not exceeding 200 tons	7*l.* 10*s.* currency.
13*l.* ,,	If above 200, and not exceeding 250 tons	8*l.* 15*s.*
16*l.* ,,	If above 250 tons	10*l.* 15*s.*

Pilots are at liberty to leave vessels forty-eight hours after they arrive at the place of their destination.

RATES CHARGED FOR TOWING VESSELS BY THE STEAMERS FROM QUEBEC TO MONTREAL.

Breadth of Beam.	9 ft. draft pay each upwards.			For each additional foot over 9 feet.			DRAFT OF WATER ON EACH VESSEL.																	
							10 feet.			11 feet.			12 feet.			13 feet.			14 feet.			15 feet.		
Feet.	£.	*s.*	*d.*	£.	*s.*	*d.*	£.	*s.*	*d.*	£.	*s.*	*d.*	£.	*s.*	*d.*	£.	*s.*	*d.*	£.	*s.*	*d.*	£.	*s.*	*d.*
20	33	6	8	3	6	8	36	13	4	40	0	0	43	6	8	46	13	4	50	0	0	53	6	8
21	35	0	0	3	15	0	38	15	0	42	10	0	46	5	0	50	0	0	53	15	0	57	10	0
22	36	13	4	4	3	4	40	16	8	45	0	0	49	3	4	53	6	8	57	10	0	61	13	4
23	38	6	8	4	11	8	42	18	4	47	10	0	52	1	8	56	13	4	61	5	0	65	16	8
24	38	8	0	4	16	0	43	4	0	48	0	0	52	16	0	57	12	0	62	8	0	67	4	0
25	40	0	0	5	4	0	45	4	0	50	8	0	55	12	0	60	16	0	66	0	0	71	4	0
26	41	12	0	5	12	0	47	4	0	52	16	0	58	8	0	64	0	0	69	12	0	75	4	0
27	43	4	0	6	0	0	49	4	0	55	4	0	61	4	0	67	4	0	73	4	0	79	4	0
28	44	16	0	3	8	0	51	4	0	57	12	0	64	0	0	70	8	0	76	16	0	83	4	0

Any vessel taking the boat at any intermediate distance between Quebec and the church at *Batiscan* pays the full towage, as if towed from Quebec. If taken in tow between Batiscan Church and the wharf at *Three Rivers*, pays three-fourths of the full towage. If taken in tow between the wharf at Three Rivers and Sorel, pays two-thirds of the full towage. If taken in tow between Sorel and the church of Point aux Trembles, pays one-half the full towage; and from the church at Point aux Trembles, or any intermediate place above the said point, to Montreal, pays one-third of the full towage.

It being understood that when towage is engaged for any vessels at Quebec, as they will have the preference over others, the full towage is to be paid for, whether the whole, or part, or none, of the towing be performed; the deduction made referring to any vessel, for which towage had not been previously engaged at Quebec.

Passengers on board vessels in tow to pay one-half the steam-boat steerage rates.

Masters of vessels to furnish tow-lines and hawsers.

Not less than 9 feet to be charged as draft-water.

The greatest draft of water to be taken as measurement.

Should the masters of boats, from any just reason, feel it necessary to cast off a vessel, no deduction to be made on the towage, provided they are re-taken by the first opportunity.

Vessels towed from Montreal, or any other place above Sorel to Three Rivers, to be charged three-fourths of the towage to Quebec; and from Three Rivers and above Port Neuf, to be charged one-half towage.

All pilotage to be paid by the masters or consignees.

In the event of the vessels grounding when in tow, in consequence of being too deeply laden, or from the fault of the ship's pilot, the detention to be paid for; also the tariff rate for freight taken out.

The Proprietors will not hold themselves liable for any damage that may be done to vessels or warps, either in taking on or casting them off.

Towage payable on demand.

The trip upward from Quebec to Montreal is now commonly performed in about 18 hours, and downward in 14; stoppages at *Three Rivers* and *William Henry*, of one hour each, included.

See, upon this subject, the communications to and from Nath. Gould, Esq., '*Nautical Magazine*,' January, 1834.

J. Rider, Printer, 14, Bartholomew Close, London.

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